

# The Mining Journal,

## RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The Mining Journal is Registered at the General Post Office as a Newspaper, and for Transmission Abroad.]

No. 2570.—Vol. LIV.

LONDON, SATURDAY, NOVEMBER 22, 1884.

[WITH SUPPLEMENT.] [PRICE SIXPENCE. BY POST, £1 4s. PER ANNUM]

**MR. JAMES H. CROFTS, STOCK AND SHARE DEALER,**  
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.  
ESTABLISHED 1842.

BUSINESS transacted in all descriptions of MINING STOCKS and SHARES (British and Foreign), Consols, Bonds, (Foreign and Colonial), Railways, Insurance, Assurance, Telegraph, Tramway, Shipping, Canal, Gas, Water, and Dock Shares, and all Miscellaneous Shares.

BUSINESS negotiated in STOCKS and SHARES not having a general market value.

Every Friday a GENERAL and RELIABLE LIST issued (a copy of which will be forwarded on application), containing closing prices of the week.

MINES INSPECTED.

BANKERS: CITY BANK, LONDON.—SOUTH CORNWALL BANK, St. Austell.

TELEPHONE NUMBER 1003.

SPECIAL DEALINGS in the following (or part):—

120 Asia Minor, 3s. 3d.	100 Guinea Coast Gold, offer wanted.	50 Phoenix United, 2s. 9d.
150 Alankoo, f.p.d., 4s. 6d.	50 Guinistake (Gillies), 10s.	30 Fannistake, 2s. 10s.
100 Almada, 3s.	100 Hoover Hill, 5s. 6d.	80 Prince of Wales, 6s. 6d.
25 Bedford United, 27s.	100 Home Mines Trust, 20s.	200 Pestana, 1s. 3d.
300 Balkis, 3s. 9d.	200 Indian Consol., 3s. 3d.	100 Rio Tinto, 21s. 17s. 6d.
50 Bratsberg, 23s. 9d.	100 Javali, 4s.	100 Ruby (old), 10s. 6d.
50 Carn Camborne, 2s.	200 Kapanga, 2s. 9d.	Do. (new), 8s. 6d.
100 Callao Bie, 14s.	50 Killifreth, 15s.	25 Richmond, 24s. 8s. 9d.
100 Callao Bie, 14s. 6d.	50 Kimberley No. Block, 100s.	15 Roman Grav., 43s.
100 Callao Bie, 14s. 6d.	100 Kohinoor B., 3s. 6d.	20 Schwab's Gully, 25s.
100 Callao Bie, 14s. 6d.	50 Kongsberg, 100s.	100 Spitzkop, 13s.
100 Callao Bie, 14s. 6d.	100 La Plata (New), 5s. 3d.	25 South Caradon, 12s.
100 Callao Bie, 14s. 6d.	25 Leadhill, 27s.	20 So. Condurow, 28s.
100 Callao Bie, 14s. 6d.	200 Lisbon-Berlyn, 6s. 6d.	100 South Darren, 5s. 6d.
100 Callao Bie, 14s. 6d.	25 Marke Valley, 10s.	25 So. Devon Uni., 3s.
100 Callao Bie, 14s. 6d.	25 Mason & Barry, 23s. 9d.	50 South Penitential, offer wanted.
100 Callao Bie, 14s. 6d.	25 Monte, offer wanted.	100 Tamaracherry, 6s. 3d.
100 Callao Bie, 14s. 6d.	50 Montana, 16s.	20 Tolima A., 25s.
100 Callao Bie, 14s. 6d.	150 Mounts Bay, 2s. 9d.	50 ditto B., 25s.
100 Callao Bie, 14s. 6d.	100 Mysore Gold, 35s. 9d.	100 Transvaal Gold, 15s.
100 Callao Bie, 14s. 6d.	100 New Caradon, 1s.	20 Trevaunance, 21s. 10s.
100 Callao Bie, 14s. 6d.	100 New Callao, 4s. 6d.	25 Untd. Mexican, 23s. 2s.
100 Callao Bie, 14s. 6d.	100 New Emma, 12s. 6d.	50 Victoria Gold, 7s. 6d.
100 Callao Bie, 14s. 6d.	50 New Kitty, 27s. 6d.	100 Wheel Agar, 21s. 2s. 6d.
100 Callao Bie, 14s. 6d.	200 Nouveau Monde, 2s. 9d.	100 Wheel Basset, 27s. 6d.
100 Callao Bie, 14s. 6d.	50 New W. Caradon, 2s. 6d.	100 West Callao, 3s. 6d.
100 Callao Bie, 14s. 6d.	200 Nundydoo, 12s.	20 West Phoenix, 6s. 6d.
100 Callao Bie, 14s. 6d.	50 Old Shepherds, 11s.	40 West Caradon, 2s. 6d.
100 Callao Bie, 14s. 6d.	100 Oregum, 10s.	100 West Orebor, 1s.
100 Callao Bie, 14s. 6d.	50 Organo, 10s.	50 West Rolgreen, 12s.
100 Callao Bie, 14s. 6d.	50 Orita, 25s. 3d.	100 West Rolgreen, 12s.
100 Callao Bie, 14s. 6d.	50 Oscar, 12s. 6d. pd., 19s.	100 Wheel Coates, 2s. 6d.
100 Callao Bie, 14s. 6d.	100 Oscar Vendors, 21s.	100 Wheel Orebor, 23s.
100 Callao Bie, 14s. 6d.	20 Polsero, 22s.	50 Wheel Kitty, 14s. 6d.
100 Callao Bie, 14s. 6d.	50 Potosi (New), 15s.	50 Wheel Silver & Lanteglos.
100 Callao Bie, 14s. 6d.	100 Port Phillip, 2s. 3d.	100 Wynad Perseu., 2s.
100 Callao Bie, 14s. 6d.	100 Parys Copper, 1s. 9d.	

SHARES SOLD FOR FORWARD DELIVERY (ONE, TWO, OR THREE MONTHS) ON DEPOSIT OF TWENTY PER CENT.

BUSINESS at CLOSE PRICES in all Market TIN, COPPER, LEAD, GOLD, SILVER, and DIAMOND SHARES.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.

RAILWAYS.—SPECIAL BUSINESS.—Fortnightly Accounts opened on receipt of the usual cover.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.

FOREIGN BONDS.—SPECIAL BUSINESS.—Fortnightly Accounts opened on receipt of the usual cover.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.

AMERICAN AND CANADIAN STOCKS AND SHARES.—SPECIAL BUSINESS.—Fortnightly Accounts opened on receipt of the usual cover.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.

OPTIONS in all STOCKS and SHARES dealt in.—JAMES H. CROFTS, 1, FINCH LANE, LONDON.

GOLD AND SILVER MINES.—SPECIAL BUSINESS in ALL marketable INDIAN GOLD SHARES, and in Colombian Hydraulic, California, Callao, "Bie," El Callao, Gold Coast, Kongsberg, New Callao, Oscar, West Callao, Tolima A, Tolima B, La Plata, Rio Tinto, Fronto, and Bolivia, Potosi, Chile, Nouveau Monde, Ruby, Richmond, Victoria.

SHARES IN THE ABOVE SOLD FOR FORWARD DELIVERY ONE, TWO, OR THREE MONTHS ON DEPOSIT OF TWENTY PER CENT.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.

MISCELLANEOUS SHARES of all DESCRIPTIONS BOUGHT or SOLD.—SPECIAL BUSINESS.—Arated Broad, Aylesbury Dairy, Brighton Aquarium, General Credit, Hudson's Bay, Native Guano, Suez Canal, Westminster Aquarium, and Hotel Shares.

SHARES SOLD FOR FORWARD DELIVERY, ONE, TWO, OR THREE MONTHS, ON DEPOSIT OF TWENTY PER CENT.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.

BALKIS SHARES.—SPECIAL BUSINESS at CLOSE MARKET PRICES either for CASH or FORWARD DELIVERY one, two, or three months.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.

TRANSVAAL GOLD AND SOUTH AFRICAN DIAMOND FIELDS.—SPECIAL BUSINESS in all Transvaal Shares, including BALKIS, LISBON-BERLYN, TRANSVAAL, SPITZKOP, SCHWAB'S GULLY, KIMBERLEY NORTH BLOCK, and KIMBERLEY CENTRAL.

SHARES IN THE ABOVE SOLD FOR FORWARD DELIVERY ON DEPOSIT OF TWENTY PER CENT.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.

ESTABLISHED 1842.

MESSRS. ENDEAN AND CO., STOCK AND SHARE DEALERS, 25, GRACECHURCH STREET, LONDON, E.C.

ESTABLISHED 1862.

BANKERS: LONDON AND WESTMINSTER, Lothbury, E.C.

MESSRS. PENNINGTON AND CO., SWORN BROKERS AND SHARE DEALERS, 13, MOORGATE STREET, LONDON, E.C.

BUSINESS in all DESCRIPTIONS of STOCKS, MINING and other SHARES.

ESTABLISHED 1869.—BANKERS: ALLIANCE (Limited).

THOS. ELS AND CO., STOCK AND SHARE DEALERS, 5, BOND COURT, WALBROOK, LONDON, E.C.

Business transacted in all Stock Exchange Securities, Foreign Stocks, Railways, Mines, and Miscellaneous Shares.

Thos. Els and Co. have Special Business in the following Mine Shares:—

50 Balkis, 3s. 3d.	80 La Plata, 5s. 6d.	25 Orita, 25s. 9d.
50 California, 11s.	100 Lisbon-Berlyn, 6s. 6d.	50 Oscar, 10s.
50 Colombian Hyd., 9s. 9d.	50 Mysore Gold, 35s. 9d.	100 Oregum, 10s. 6d.
50 Devon Consols, 35s.	50 North Tolima, 20s.	50 Potosi, 17s.
50 Eton, 35s. 9d.	50 Nundydoo, 12s.	70 Ruby, 9s.
50 Glenrock, 3s. 3d.	50 Old Shepherds, 10s. 6d.	20 Schwab's Gully, 25s.
50 Home Mines, 20s.	100 Organo, 10s. 6d.	100 Victoria, 7s. 6d.

Monthly Circular touching upon Mines in the United States of Colombia, including Colombian Hydraulic, Organo, Orita, Tolima, and North Tolima, Mines in the Transvaal, including Lisbon and Berlyn and Balkis, and upon Indian Gold mines, including Glenrock, Mysore, Nundydoo, Oregum, and Wynad Perseu., now ready, post free on application.

BRITISH AND FOREIGN MINING OFFICES.

MESSRS. PETER WATSON AND CO., 18, AUSTIN FRIARS, OLD BROAD STREET, LONDON, E.C.

BANKERS: THE ALLIANCE BANK (Limited).

MESSRS. PETER WATSON AND CO.'S

BRITISH AND FOREIGN MONTHLY MINING NEWS—STOCK AND SHARE INVESTMENT NOTES—MINES, MINERALS, AND METAL MARKETS—SHARE LIST, No. 865, Vol. XVII., for NOVEMBER month, will shortly be ready, and will be sent to customers on application.

Annual Subscription..... 5s. | Single Copy..... 6d.

MR. ALFRED E. COOKE, BRITISH AND FOREIGN STOCK AND SHARE DEALER, 9, OLD BROAD STREET, LONDON.

ESTABLISHED 1853.

(Opposite the Stock Exchange, with which his offices are in DIRECT TELEGRAPHIC COMMUNICATION.)

TELEPHONE No. 1268.

Mr. ALFRED E. COOKE can sell the following shares, or any smaller marketable number at prices affixed FREE OF COMMISSION:—

50 Almada, 3s. 6d.	50 Goginan, 2s.	50 Oregum, 4s.
120 Balkis, 3s. 6d.	30 Hoover Hill, 4s. 9d.	40 Potosi, 16s. 3d.
20 Bratsberg, 23s. 9d.	30 Home Mines Trust, 20s.	80 Prince of Wales, 6s.
50 Callao Bie, 14s.	50 Killifreth, 15s.	10 Schwab's Gully, 25s.
150 Chile Gold, 2s. 6d.	60 La Plata (New), 5s. 6d.	20 South Caradon, 12s. 9d.
50 Colombian Hydraulic, 10s.	100 Lisbon-Berlyn, 6s. 6d.	70 South Kitty, 10s.
50 Chontales, 3s. 3d.	150 Mounts Bay, 2s. 6d.	10 Tolima A., 25s.
50 Cor. South Australian, 2s.	15 Mysore Gold, 35s. 9d.	40 Trevaunance, 21s. 10s.
100 Denver, 2s.	50 New Caradon, 2s. 6d.	10 U. Mexican, 23s.
30 Devala Moyer, 6s.	25 New Callao, 4s.	20 Victoria Gold, 7s.
60 Devon Friend., 3s.	100 New Kitty, 27s. 6d.	50 Van, 12s.
50 Duchy Peru, 10s.	200 Nouveau Monde, 2s. 9d.	5 Wheel Agar, 21s.
40 East Blue Hills, 5s. 3d.	50 New W. Caradon, 2s. 6d.	10 Wheel Basset, 27s. 6d.
50 East Wheel Rose, 7s. 9d.	30 Nundydoo, 12s.	30 West Callao, 4s. 3d.
20 Eton, 35s. 9d.	50 Old Shepherds, 12s. 6d.	30 West Caradon, 2s. 6d.
1 El Callao, 27s. 6d.	20 Organo, 10s.	50 West Orebor, 1s.
30 Frontino, 12s.	10 Orita, 25s. 9d.	50 West Rolgreen, 12s.
	50 Oscar, 12s. 6d. pd., 19s.	100 Wheel Coates, 2s. 6d.
	40 Oscar, fully pd., 22s. 6d.	100 Wheel Orebor, 23s.

MANY OF THE ABOVE SHARES WILL BE SOLD FOR FORWARD DELIVERY ONE, TWO, OR THREE MONTHS ON DEPOSIT OF TEN OR TWENTY PER CENT.

BUYERS of Mine Shares can be supplied at LOWEST POSSIBLE PRICES. SELLERS of Mine Shares can obtain HIGHEST MARKET PRICES on application to Mr. ALFRED E. COOKE.

LARGE PROFITS. Apply for List issued by ALFRED E. COOKE.

NORTH MEXICAN—SPECIAL BUSINESS.—The Managing Director's report may be had on application.

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THREE PER CENT. COVER.

Mr. ALFRED E. COOKE has correspondents in every important city and town in England, whereby he can deal in Local Shares of every description.

Daily and Weekly Lists of Prices issued to clients on application.

ADVANCES MADE ON STOCKS AND SHARES.

Letters and Telegrams receive immediate personal attention.

BANKERS: ROYAL EXCHANGE (Limited), London.

MR. JAMES STOCKER, STOCKBROKER, 2, CROWN COURT, THREADNEEDLE STREET, LONDON, E.C.

Has Special Business in the following for cash or settlement by arrangement free of commission:—

60 Alankoo, 4s.	100 Eton, 35s. 9d.	100 Nouveau Monde, 2s. 6d.
100 Balkis, 3s.	90 Glenrock, 3s. 3d.	80 Nundydoo, 11s.
40 Bratsberg, 23s. 9d.	100 Gold Coast, 3s. 9d.	70 Old Shepherds, 10s. 6d.
50 Californian, 11s.	40 Great Holway, 27s.	80 Orita, 25s.
80 Callao Bie, 14s.	60 Home Mines, 20s.	45 Organo, 10s. 6d.
30 Carn Camborne, 2s.	100 Ind. Consolidated, 2s. 9d.	50 Oscar Gold, 19s.
75 Chile Gold, 2s. 6d.	50 Kapanga, 2s. 9d.	80 Potosi (New), 15s. 3d.
100 Chontales, 3s. 3d.	50 La Plata, 5s. 6d.	80 Prince of Wales, 6s.
50 Colombian, 12s.	30 Leadhill, 27s. 6d.	30 Richmond, 24s.
25 Colorado, 2s. 6d.	60 Lisbon-Berlyn, 6s. 6d.	30 Schwab's Gully, 25s.
50 Cor. So. Austr., 2s. 6d.	40 Montana, 15s. 6d.	50 Transvaal Gold, 14s. 6d.
170 Denver, 2s.	50 Mysore Gold, 35s.	25 United Mexican, 3s.
50 Devon Friend., 3s.	50 New Callao, 4s.	75 Victoria Gold, 7s.
50 East Rose, 7s. 9d.	50 Nine Reefs, 5s. 3d.	60 West Callao, 4s. 3d.

The following SHARES WANTED for CASH:—

100 Colombian.	50 New Potosi.	120 Orita.
100 Kohinoor B.	50 Nundydoo.	60 Victoria Gold.

Railways, Foreign Bonds, Gold and Silver Mines, Miscellaneous Shares, and all Stock Exchange Securities.

ESTABLISHED 1851.

BANKERS: LONDON AND WESTMINSTER.

JOHN RISLEY, STOCK AND SHARE BROKER, AND MINING SHARE DEALER, 38, CORNHILL, LONDON, E.C.

ESTABLISHED 1860.

BANKERS: LONDON AND WESTMINSTER, Lothbury, E.C.

MR. W. TREGELLAS, 40, BISHOPSGATE STREET WITHIN, E.C.

W. TREGELLAS is open to an offer for £10 fully paid 6 per cent. Shares and 5 per cent. Debenture Bonds in the National Standard Land Mortgage and Investment Company (Limited).

MESSRS. CLARE AND CO., STOCK AND SHARE DEALERS, 18, AUSTIN FRIARS, OLD BROAD STREET, E.C.

BANKERS—THE ROYAL EXCHANGE BANK (LIMITED).

SPECIAL BUSINESS in all INDIAN GOLD and SOUTH AFRICAN DIAMOND SHARES.

MR. W. MARLBOROUGH, STOCK AND SHARE DEALER, 29, BISHOPSGATE STREET, LONDON, E.C. (Established 30 Years)

Can sell the following SHARES:—

25 Bratsberg, £1 5s.	30 Great Holway, 10s.	20 Oscar Gold, 12s. 6d. pd.
250 Balkis, 3s. 9d.	100 Indian Con., 2s. 6d.	10s.
60 Colombian Hyd., 9s. 9d.	75 Kapanga, 2s. 6d.	15 Panulillo, £3 7s. 6d.
40 California Gold, 10s.	20 Leadhill, £1 7s. 6d.	20 Prince of Wales, 7s. 6d.
30 Callao Bie, 12s. 6d.	75 La Plata, 5s. 3d.	40 Potosi, 15s. 3d.
100 Chile Gold, 2s. 3d.	50 Lisbon-Berlyn, 7s.	10 Roman Gravels, £3 7s. 6d.
50 Chontales, 3s.	20 Montana, 15s. 6d.	10 Richmond, 24s.
45 Cartago, 10s. pd., 5s. 9d.	5 Mona, 10s.	15 Schwab's Gully, 25s.
150 Denver Gold, 2s.	25 Mysore Gold, £1 18s.	10 Tolima A., 25s.
25 Devon Friend., 3s.	100 Nouveau Monde, 2s. 9d.	5 U. Mexican, £3 5s.
25 Don Pedro, 6s.	35 Nundydoo, 11s. 3d.	10 U. Mexican, £3 5s.
30 East Rose, 7s. 6d.	50 Nine Reefs, 5s.	40 Victoria, 7s. 6d.
20 Eton, £2 2s.	40 Organo Gold, 10s. 6d.	50 West Callao, 4s. 3d.
50 Eberhardt, 4s. 9d.	25 Old Shepherds, 11s. 3d.	30 West Orebor, 2s.
30 Frontino, 11s. 3d.	20 Orita, 25s. 3d.	50 Wheel Coates, 2s.
25 Goreded, 2s.	75 Oregum, 3s. 6d.	

SHARES BOUGHT AND SOLD AT NET PRICES.

PURCHASES FOR FORWARD DELIVERY AT SPECIAL PRICES ON RECEIPT OF DEPOSIT OF 10 PER CENT.

BANKERS: ALLIANCE BANK (Limited).

MR. WILLIAM H. BUMPUS, STOCK BROKER AND MINING SHARE DEALER, 44, THREADNEEDLE STREET, LONDON, E.C.

[Established at this Address in 1867.]

BUSINESS transacted in ALL STOCK EXCHANGE SECURITIES, MINING and MISCELLANEOUS SHARES of every description.

An INVESTMENT LIST free on application.

SPECIAL BUSINESS in the undermentioned:—

50 Alankoo, 5s.	30 Frontino, 14s.	100 Old Shepherds.
100 Almada, 3s.	100 Glenrock, 3s. 3d.	170 Potosi (New), 17s.
25 Bratsberg, 25s.	10 Great Laxey, £3 7s.	50 Prince of Wales,
150 Balkis, 3s. 6d.	50 Home Mines Trust,	20 Polberro, 46s.
20 Bedford United, 31s. 3d.	100 Indian Consol., 3s.	25 Panulillo, £3 2s. 6d.
150 Callao Bie, 14s. 3d.	50 Javali, 4s. 6d.	100 Plumas Eureka, 17s.
150 Chile Gold, 2s. 6d.	100 Karsanga, 3s. 3d.	35 Quebrada, £3 8s. 9d.
100 Colombian Hyd., 10s. 6d.	150 La Plata, 5s.	50 Ruby (New),
50 Carn Camborne,	25 Leadhill,	25 Richmond, 24s.
100 Callao Bie, 14s. 6d.	100 Lisbon-Berlyn, 7s.	100 South Caradon, 15s.
150 Chor tales, 3s. 6d.	50 Marke Valley, 8s. 9d.	50 Spitzkop, 12s. 6d.
25 Don Pedro (fully pd.), 6s. 3d.	75 Montana, 10s.	40 Trevaunance, 40s.
30 Colorado, £2 7s.	40 Mysore Gold, 37s. 6d.	100 Trevaunance,
150 Devon Friend., 3s. 9d.	120 New Emma, 13s. 9d.	20 Untd. Mexican, £3 7s.
120 Devala Moyer, 5s. 9d.	25 New Kitty, 27s. 6d.	75 Victoria Gold, 6s. 3d.
3 Dolocoth, 267.	150 Nouveau Monde, 2s. 9d.	10 West Kitty, £2 6s. 3d.
100 Eberhardt, 5s.	50 Nine Reefs, 5s. 6d.	50 West Godolphin, 20s.
70 East Wh. Rose,	100 Oregum,	15 Wheel Grenville, £2 6s.
50 East Blue Hills, 5s.	30 Organo, 10s. 6d.	5 Wheel Agar,
50 East Lovell, off. wtd.	50 Orita,	50 Wheel Orebor, 23s. 6d.
100 East Wh. Rose, 3s. 6d.	50 Oscar Gold, 19s. 6d.	

Where prices are not inserted offers may be made.

The present is a most favourable opportunity for investing in SOUND MINING SECURITIES, a judicious purchase of which at the low prices now ruling will, in all probability, result in large profits within the next few months.

MR. BUMPUS devotes SPECIAL ATTENTION to LEGITIMATE MINES, and is in a position to afford reliable information and advice to intending investors and others in the selection of Shares either for INVESTMENT or SPECULATION. Correspondence invited.

ESTABLISHED 1867.

MR. CHARLES THOMAS, MINING AGENT AND ENGINEER, 3, GREAT ST. HELEN'S, LONDON, E.C.

MR. ALFRED THOMAS, MINING ENGINEER, AND STOCK AND SHARE DEALER, 10, COLEMAN STREET, LONDON, E.C.

ESTABLISHED 1852.

MR. HENRY J. TALLENTIRE, STOCK BROKER AND MINING SHARE DEALER.

SPECIAL DEALINGS in BALKIS, LISBON-BERLYN, MYSORE, and all TRANSVAAL and INDIAN MINES.

SHARES CAN BE SECURED for payment in one, two, or three months, upon deposit of 20 per cent.

OFFICES—21, THREADNEEDLE STREET, LONDON, E.C.

BANKERS: CITY BANK, Threadneedle-street, E.C.

MR. J. GRANT MACLEAN, SHAREBROKER AND IRONBROKER, STIRLING, N.B.



DESCRIPTION OF A NEW RULE FOR TESTING FANS.—No. II.  
BY PROF. A. S. HERSCHEL, M.A., F.R.S.

If the formula so strongly advocated by the Engineer and used by Mr. Clarke produces a paradox of what practical utility it is, and in what better position does it leave the matter than when under the consideration of this Institute? for then we knew the error was in use made of the water gauge observations, and you will notice in my remarks at the time before quoted that I said in my opinion the mistake was in the manner in which we applied the water gauge indications, as a factor, and in a mine the gauge indicated the drag, but here it was only a sort of wind gauge. However, as Prof. Herschel has clearly and correctly, Mr. Smith thinks, laid down the rule for arriving at the power developed by fans when tested apart from the drag of a mine. The Professor had tested some of the smaller fans at Mr. Capell's residence, and says—I send the numbers of fan measurements which I showed you the results of, with the qualification, however, that they were hastily read off and noted down, so that they desire no special attention, nor again have they, I am sure, any weighty value by themselves alone, the changes of circumstances which varied experiments would entail being unrepresented by any single cases, and unable to contribute as they no doubt would do, therefore to the argument one way or the other as to the proper rule for the efficiency of fans. Old (first made) 14 in. diameter open fan, inlet 7 in. diameter, blades 6 in. wide, and (=0.267 square feet). Drew 1½ in. water gauge (=9.1 lbs. per square foot) at open end of a 5 ft. round, straight zinc tube of same diameter as the inlet of the fan; with air speed there by Casella's anemometer 4400 ft. per minute = 1176 cubic feet per minute through the tube. The horse power in the air was found to be ¼-horse power nearly, or 10,702 ft. lbs. per minute by the ordinary rule.

By the new rule, however, there is to be subtracted first from the observed water gauge; what is due to air speed at the point where it was taken; computation of which can be made nearly enough by the rule (if  $V$  is the air speed in feet per minute, and  $H$  the air speed gauge required).

$$H = \frac{1}{63} \times \left\{ \frac{1}{64} \times \left( \frac{V}{60} \right)^2 \right\} = \left( \frac{1}{63} \right) \times \left( \frac{V}{60} \right)^2$$

very nearly; supposing that 63 ft. head of air would balance 1 in. water gauge; =

$$\left( \frac{V}{60 \times 63} \right)^2 = \left( \frac{V}{3960} \right)^2 \text{ very nearly} = \left( \frac{V}{4000} \right)^2 \text{ very nearly;}$$

or more exactly =  $\left( \frac{V}{4000} + 1 \text{ per cent. of } \frac{V}{4000} \right)^2$  very nearly.

In the case of this experiment  $V = 4400$  ft. per minute, air speed:—

$$\frac{V}{4000} + 1 \text{ per cent. of } \frac{V}{4000} = \frac{4400}{4000} + 1 \text{ per cent. of } \frac{4400}{4000}$$

$$= 1.1 + .011 = 1.111, \text{ whence } H = (1.111)^2 = 1.234 \text{ in. fictitious water gauge.}$$

Real residual water gauge = 1.75 in. — 1.234 in. = .516 in.; or resistance to air current = 0.516 × 5.2 lbs. per square foot = 2.68 lbs. per square foot. Work of resistance overcome = 1176 ft. × 2.68 lbs. per square foot = 3152 foot lbs. per minute = 0.095-horse power (between 1-11th and 1-10th of a horse power only).

Second experiment.—With the same conditions; water gauge at tube mouth, 2.2 in. (= 11.44 lbs. per square foot). Air speed at ditto, 5100 ft. per minute (or volume = 1363 cubic feet per minute). Then by the ordinary rule.

Work in the air = 11.44 × 1362 = 15,582 foot lbs. per minute = 0.472-horse power.

But by the altered rule,  $H =$

$$\left( \frac{V}{4000} + 1 \text{ per cent. of ditto} \right)^2 = \left( \frac{5100}{4000} + 1 \text{ per cent. ditto} \right)^2$$

$$= (1.275 + .013)^2 = (1.288)^2 = 1.659 \text{ fictitious water gauge.}$$

Real residual water gauge = 2.20 — 1.66 = 0.54 in.; or resistance to air current = 0.54 × 5.2 lbs. per square foot = 2.81 lbs. per square foot, and work of resistance overcome = 1362 × 2.81 = 3828 foot lbs. per minute = 0.116-horse power (about 1-9th of a horse power only).

Third experiment.—Large wide-bladed mine fan, 22 in. diameter, inlet 13 in. diameter = 132 square inch = 0.92 square foot; drew at the open inlet ½ in. water gauge = 3.25 lbs. per square foot, with air speed thereby the anemometer 3000 ft. per minute = 2760 cubic feet per minute; whence by the ordinary rule work done in the air = 3.25 × 2760 = 8970 foot lbs. per minute = .272-horse power. Here the water gauge to be deducted is,  $H =$

$$\left( \frac{3000}{4000} + 1 \text{ per cent. of ditto} \right)^2 = \left( \frac{3075}{4000} \right)^2 = 0.574 \text{ fictitious water gauge}$$

and real residual water gauge = 0.625 — 0.574 = 0.051 in. = 0.265 lbs. per square foot. So that work of real resistance overcome = 0.265 × 2760 = 732 foot lbs. per minute = 0.0222 horse power; or 1-45-horse power only.

This last example (which is certainly too low) shows that the new rule, though much more correctly applicable to these cases than the ordinary one, is yet no more than any other rule strictly applicable to all cases. Nor can any rule, Mr. Smith believes, be always so. When, for instance, a double power Capell fan is closed in, to make it a blast fan, it will show, he anticipates, suctional water gauge at the inlet, and pressure water gauge at the outlet or in the case. And he would treat these independently, and applying the new rule to each by itself, add together the two works of resistance found by the rule as the whole work in the air, or at least the new rule would want modifying in such an extreme case [The general way of treating correctly every variety of case is given further on in another letter.—A. S. H.], and in a way which all cases partake of partly, but not in such a great degree. By what means of measuring, gauging, and testing the air at different parts of a fan the needful adjustment and modification is to be determined which this new rule (as a better one, Mr. Smith believes than the old one) ought to receive to make its expression for the work in the air strictly accurate, is, he has no doubt, in general an unsolvable problem. The condition in which fans work are much too manifoldly various and separately distinct, and it seems probable innumerable in their differences from each other to let the actions either of all or any one be described perfectly and completely as a whole. But approximations to the actions of classes of them can be made. The problem of fan ventilation has much the same principles guiding it that the transmission of power by electricity has, and a complete explanation of one will probably be in a great measure the explanation of the other. There is no discredit therefore to anybody's scientific knowledge not to be conversant with the capricious features presented by ventilators in their various forms, and not to be able to account for all of them.

To obtain Prof. Herschel's views upon the subject, Mr. Smith wrote—The members of the Institute are very anxious to know the result of your enquiries into the fan question, would you, therefore, kindly permit me to communicate to them the purport of your letter to me, written from Bangor, which so excellently and clearly elucidates the matter? When the water gauge is taken in a pit it is placed in a door between the upcast and downcast shafts out of the current, so that one end is open to the air as it enters the passages of the mine at full velocity, and the other is open to the air after it has gone through the mine. As the latter is read I take it we get the net correct water gauge. Is not this so, and does it not prove or support your theory of deducting fictitious from indicated water gauge when testing the fan in the open apart from a mine? You said it was wrong to take the weight of air as air in effect moved itself. I took your meaning, but would prefer you to explain it if it would not be troubling you too much to put it in form for me? [The head due to onward velocity, and the barometric head, taken together at any point of an air-stream constitute its dynamic head at the place of measurement; and in a complete circuit like that of a mine, fan and outer air, it is the air's dynamic head alone, at every point, which measures the work there stored or accumulated in the air. To start air or water round a returning channel at any prescribed speed requires (apart from friction) no expenditure of work upon it if the fluid's dynamic head at every point remains the same as it was when

the fluid was at rest. Friction absorbs, and fans supply dynamic head. Whirling velocity is a part of the dynamic head which fans give to air between their inlet and their outlet points; but without special contrivances, either of the fan cover or of its blades to convert this kind of velocity either into onward velocity or into barometric head, it is of no use to conquer friction in the circuit, as its natural course either in a duct or in the atmosphere is to waste itself in friction. It should be said that mechanical ventilators can only raise energy of dynamic head in an air (or water) course by impressing both onward and whirling impulse together to the stream, either in a visible or in some hidden way which satisfies the dual nature of the stream's dynamic store. Fans and all kinds of motors whose whirling impulse leaves them in the visible form of whirl or spin given to the current that they make (unconverted into onward velocity or barometric head) are single-power motors only, as half their expended power is useless for anything but winnowing effects. Fans which conceal the whirling impulse that they use are double-power from the greater efficiency of their work to propel a stream against resistance.—A. S. H.]

In replying to Mr. Smith's letter, Prof. Herschel excuses himself as regards the general request that he would communicate to South Staffordshire and East Worcestershire Mining Institute the results of my enquiries about the modes of action of ventilating fans, and continues—If I am brief in my reply because the process of trundling air with fans in the many varieties of ways that it is susceptible of is a much longer and much more complicated and difficult topic to deal with both theoretically and practically in its nature than can be described in a few pages, or than anything less than an elaborately subversive essay, I believe on all ordinary ways of looking at mechanical actions would offer a reasonable prospect of being able to accomplish with intelligible clearness. The letter which I wrote you in July from Bangor was intended to give, as I believe it does correctly, the real explanation of the extraordinary horse power in the air calculated by the usual rules from measures of the trial performances of Mr. Capell's fan, and I would esteem the honour which you propose to accord to the suggestion of submitting it to the consideration of the Mining Institute at Dudley very highly indeed. But the general principle of the explanation was only partly and imperfectly stated in the letter, and it has led you, I think, rightly to extend its proper scope a little in applying a rule to air velocities in a mine, which I at first supposed had no proper place and veracity elsewhere than just at the inlet and round the blade tips circumference of a revolving fan.

TWO MILES OF GOLD.—In an article from a correspondent, published in the Times of Nov. 13, it is stated that "Seven years ago Mr. Harry Davis, of Droitwich, and Charles MacLaurin Nichols, son of the assistant-secretary of the British Museum, emigrated to Australia, the former educated as an engineer, the latter as blacksmith, farrier, carpenter, and farmer. In the early part of last year Mr. Davis prospected 13 weeks for precious metals in the northern part of the continent. During the whole of that time he was alone with the cannibal blacks, hoping by presents of small articles to obtain a clue to an untouched auriferous district. He learnt a little of the native lingo, and displayed specimens of the rocks he was anxious to discover. He lived among these aborigines, lightening his burden of food and trifles, but they did not always reciprocate his kindness. On two or three occasions, having erected his tent for the night in their midst, but taking the precaution to ride away a dozen miles to sleep, he found, on returning in the morning, that it had been speared through and through. He would have been revenged, however, he says, as, instead of a succulent morsel, they would only have had for their repast sinew and bone. Nevertheless, he succeeded in his object, and unboomed by their aid a metalliferous track of land. He immediately returned to England, came to

London, and studied for two months mining operations in Jersey-street, and gold in the quartz at the Natural History Museum in Cromwell-road. His project was to take out a gold-crusher, but he found the cost beyond his means; moreover, there was an expense to be calculated of 26l. a ton for conveyance by bullock-team 300 miles into the interior.

He returned to Australia, taking Mr. Charles Nichols with him. Regaining his Dorado, he was not a little surprised to find the whole aspect of the country changed. There were 40 miners at work, and two or three mills erected. The two young men soon selected their claim, on a galena mountain, put up their houses, built a forge, and settled down to tempt Mother Earth to yield them up a modicum of treasure in return for enthusiastic research. Things did not look altogether well. . . . He (Nichols) had been on the claim just six weeks, when one day cleaning out an old gully to make a ventilator for his mine, he struck a vein of rich coarse gold. Specimens, picked up haphazard from the mine and galena lode, have been sent to London for assay. On arrival, the ores were found to be heavy, but except in the case of two very small fragments, and then only very sparsely, no indication of gold was visible. An assay of each of the two ores, galena and quartz, has just been conducted by Messrs. Wellby, of Garrick-street, Covent-garden, and has produced, for the galena, the remarkable result (sample 23 lbs.) of—lead, 48.80 per cent.; silver, 25 ozs. 3 dwts.; gold, 5 dwts. per ton of ore of 20 cwt.; and, for the quartz (sample 50 ozs.)—gold, 8 ozs. 17 dwts. 8 grs. per hundredweight; and silver, 3 ozs. 10 dwts.; or, for gold, 177 ozs. odd to the ton of quartz. Messrs. Johnson, Matthey, and Co., mixing lead, silver, and gold together, assay (sample 12 lbs.)—gold, 19 ozs. 600; silver, 28 ozs. 500 per ton. Mr. Frederick Clauudet (sample 11 lbs.)—gold, 17 ozs.; silver, 27 ozs. 12 dwts. per ton.

This wealth of gold ore cannot be known to the finders for yet another week. Shortly after the discovery of the vein of gold another prospector, Mr. William Hankie, appeared at the Florence-Augusta claim, begging one of the young men to join him in working another mine in the district, the quartz lying on the surface, and extending for quite two miles. The same prospector had, in his search for gold, only just missed the famous Morgan reef, which contained the richest and purest gold ever found, assaying 99.9-10ths per cent.—only 1-10th short of being virgin gold. Mr. Nichols, who divides with Mr. Hankie, writes of the new *trouvaite*, that the stone looks well, though, as in most mines, the gold is patchy, and that they hope to get a big crushing out by Christmas, when the rains begin. The only desideratum is a crushing-machine of their own, and ½ ton stamps for the silver, the heaviest lodes of that metal in the district being hard steel-grained. Two men, aided by lithofracture, can get out from 4 to 10 tons of ore a day. Gold fetches from 2l. 18s. to 3l. 5s. an ounce. Cost of crushing 1½ a ton, conveyance 7s. a ton. The country is hilly, and hemmed in on all sides, forming a huge well. Pinnacles are numerous, and they nearly all support boulders weighing from a few pounds to 100 tons. You might fancy yourself among the so-called Druidical monuments of Stonehenge, except that there is no plain. The hills afford a good gradient for the ores, and there is abundant storage for water. Gems and numerous metals besides gold and silver are plentiful in the vicinity, and the pinnacles are alive with kangaroos and kangaroo rats, wallabies, opossums, pademelons, and birds.

HOLLOWAY'S PILLS.—The sudden changes, frequent fogs, and pervading dampness sorely impede the vital functions and conduce to ill health. The remedy for these disorders lies in some purifying medicine like these pills, which I am competent to grapple with the mischief at its source, and stamp it out without fretting the nerves or weakening the system. Holloway's pills extract from the blood all noxious matters, regulate the action of every disordered organ, stimulate the liver and kidneys, and relax the bowels. In curing chest complaints these pills are remarkably effective, especially when aided by friction of the ointment on its walls. This double treatment will ensure a certain, steady, and beneficial progress, and sound health will soon be re-established.

THE  
NORTH-EAST DIAMOND MINING COMPANY,  
OF THE KIMBERLEY MINE (LIMITED).

## DIRECTORS' REPORT FOR THE QUARTER ENDING SEPT. 30, 1884.

## TO THE SHAREHOLDERS,

GENTLEMEN, In submitting to you the accounts and balance-sheet for the quarter ending 30th September, 1884, your directors have to report that the statement which they now lay before you will show that the expectations held out in their report of 30th June last have been fully realised, the debt at that date of £3362 12s. 4d. having been wiped off, while a clear profit of £1397 16s. 7d. now appears to the credit of the company.

This shows that during the past quarter a gross profit of £4760 8s. 11d. has been cleared out of the very short spell which was had at the blue.

Following the custom of previous quarters, we have not included in our statement the 1194 loads of blue owing to us by the British Company nor the large quantity of ground lying in the claims of the Central Company, which has been reported on previously.

The following is the summary of work done during the quarter:—

Blue ground hauled .....	2347 truck loads of 16 cubic feet.
Blue ground on floors at commencement of quarter	2450 " " "
Washed during quarter .....	4797 " " "
	4297 " " "

Leaving balance on floors of .....

500 loads on 30th September.

In addition to this there are 500 loads of lumps on the floors.

The diamonds found in the 4297 loads washed, together with pickings sold last quarter, amounted to 9424½ carats, which realised £11,161 13s. 9d., being at the rate of 2.193 carats, or 5ls. 11½d. per load.

Although the accounts show that the company is in a position to pay a dividend, yet your directors recommend that the whole balance should be carried forward in order that this company may stand in an unassailable position should the Mining Board debt be called in.

Owing to the late heavy slip of reef, which has been distributed nearly over the whole mines, claims Nos. 112 and 113 have been again temporarily covered up, yet your directors can report that it has rather benefited this company than otherwise, as a large quantity of reef which was previously lying on the company's high block has been shifted away; we, therefore, consider that the prospects of the company are now far better than they have been at any time during the last three years.

With these facts before you your directors may fairly congratulate you upon the strong and sound position the company now holds.

We are, gentlemen, your obedient servants,

For the Board of Directors,  
D. VAN ULSEN, Chairman.

## THE NORTH-EAST DIAMOND MINING COMPANY, KIMBERLEY MINE (LIMITED).

## BALANCE-SHEET FOR THE QUARTER ENDING SEPTEMBER 30, 1884.

LIABILITIES.		ASSETS.	
To capital account .....	£99,000 0 0	By claim property account .....	£99,000 0 0
" sundry creditors .....	117 9 3	" floor, plant, and machinery account .....	8,109 0 3
" profit and loss .....	1,397 16 7	" cash at bank .....	£2254 15 4
		Less outstanding cheques .....	172 19 6
		" bills receivable .....	2,081 15 10
		" diamonds on hand .....	21 15 3
		" sundry debtors .....	200 0 0
			102 11 6
			£91,515 5 10

## PROFIT AND LOSS ACCOUNT FOR THE QUARTER ENDING SEPTEMBER 30, 1884.

TO BALANCE FROM LAST QUARTER		BY DIAMOND ACCOUNT	
To balance from last quarter .....	£1,362 12 4	By diamond account .....	£10,116 13 0
" rates and licenses account .....	208 1 1	" rent received for washing machinery .....	137 10 9
" produce account .....	82 7 3	" amount received for carting and horse hire, &c. ....	116 3 6
" working expenses account .....	4,958 19 3		
" salary account .....	139 10 0		
" charges account .....	224 10 0		
" balance .....	1,397 16 7		
	£10,370 7 3		£10,370 7 3

We hereby certify that we have examined the books and vouchers of the North-East Diamond Mining Company, of the Kimberley Mine (Limited), and that the foregoing balance-sheet is true and correct.

Kimberley, 14th October, 1884.

D. VAN ULSEN, Chairman.  
W. H. WHITE, Secretary.  
WM. F. CRANSWICK, } Auditors.  
JOHN PALMER, }



## Registration of New Companies.

The following joint-stock companies have been duly registered:—

**THE PNEUMATIC GRAIN ELEVATOR COMPANY (Limited).**—Capital 80,000*l.*, in shares of 5*l.* To adopt and carry out an agreement dated Oct. 6, 1884, made between John B. Stoner, of the one part, and the Hon. Wm. Nelson Hood, as trustee for and on behalf of this company, of the other part; also to do such things as may be deemed expedient for obtaining the full benefit of the patents, &c., belonging to the company. The subscribers (who take one share each) are—W. N. Hood, Wimpole-street, W.; Henry Armytage, Lower Belgrave-street, S.W.; Andrew A. Buchanan, 15, Cockspur-street, S.W.; John M. Mackintosh, 34, Jermyn-street, S.W.; Francis Aggrouf, Victoria Mansions, S.W.; Lewis Carr, 139, Holland-road; John B. Stoner, Toledo, Ohio.

**UNIVERSAL PERFECT VENTILATION COMPANY (Limited).**—Capital 60,000*l.*, in shares of 10*l.* To acquire by purchase the business of manufacturing ventilating apparatus and other articles, and of electro-plating and gilding now carried on by Charles Lawrence, at Southampton, together with the extensive factory, plant, and premises, also the patent and other rights. The subscribers (who take one share each) are—Charles Lawrence, High-street; Edw. W. Main, Poteswoods; Wm. J. Love, St. Ann's-road, N.; Wandsworth; Geo. Hewitt, Hyde Park-square; James A. Love, Horsham-road, Dorking; A. Tyler, Mare-street, Hackney; and Geo. L. Amlot, Shore-road, South Hackney.

**LONDON AND SWEDISH MATCH WORKS (Limited).**—Capital 60,000*l.*, in shares of 1*l.* To acquire by purchase or otherwise freehold premises, situated at Carlstad, Sweden, or elsewhere, comprising match factories, with land, plant, buildings, and goodwill of the business, also a patent for printing advertisements on matches for Great Britain and Ireland. The subscribers (who take one share each) are—Geo. Bateson, Lucruttia-road, Kennington; Geo. E. Hooke, Brownlow-road, Forest Gate; R. Day, Montague Villa, Forest Gate; Alfred J. Potter, St. Kilda's-road, Stoke Newington; Richard H. Dee, Flaxman-road, Camberwell; Wm. A. Pope, Hythe-neck-road, Tottenham; and F. John Warner, 98, Bishopsgate-street, E.C.

**GROGWINION CONSOLIDATED MINES (Limited).**—Capital 21,500*l.*, in shares of 1*l.* To purchase the leasehold interest in the properties known as the Grogwinion Silver-Lead Mine (Limited), the Crosswood Mining Lands Company (Limited), situate in the county of Cardigan, together with the plant and other effects, and to carry on the business of a mining company in all its branches. The subscribers (who take one share each) are—F. Standring, Wightman Villas, Hornsey; G. Bedford, Royal Exchange Avenue; E. Sydney Scales, Eliza Terrace, New Wanakad; Henry R. Moore, New Thornton Heath; John Owen, 14, Cornhill; H. Mackintosh, Dymoor-road, Stoke Newington; A. Kirby, 14, Great Winchester-street.

**BEE AND FRUIT FARMING COMPANY (Limited).**—Capital 10,000*l.*, in shares of 1*l.* To carry into effect an agreement made between Jesse Garratt and Francis Mark Edwards, and to carry on the trade of beekeepers, fruit, and other farmers. The subscribers (who take one share each) are—Jesse Garratt, St. Mary Cray, Kent; John M. Hooker, Fenchurch-street; Henry G. Morris, Belmont Hill, Lee; Lawrence Green, Maidstone; John Martin, Farnham; F. M. Edwards, St. Mary Cray; and Fred. H. Judson, Deepdene-road, Streatham.

**GASEOUS FUEL, LIGHT, AND POWER SUPPLY (Limited).**—Capital 60,000*l.*, in shares of 1*l.* To purchase and acquire upon the terms specified in the draft of an indenture intended to be made between Henry Hutchinson, Thomas Geo. McEwen, and John Charles Cottain, certain letters patent for the improvement in the manufacture of coke, &c., and to carry on the business of coke manufacture. The subscribers (who take 25 shares each) are—John J. Ford, St. Albans; Arthur Conner, 38, Devonshire Chambers, Bishopsgate Without; Thomas Lebon, Shillforger, Norfolk; Alex. Nicholson, Lancaster-road, Stroud Green; Wm. Coles, West Ham; James Chappell, Dosssett House, Great Yarmouth; and Edward J. Le François, 44, Coal Exchange.

**GWENNAP TIN AND COPPER MINE COMPANY (Limited).**—Capital 40,000*l.*, in shares of 1*l.* To carry into effect an agreement made between William John Thompson and Harry William Oscar Grobner, for the purchase of a grant to work a certain mineral property situate in the parish of Gwennap, in the county of Cornwall, and to work and develop all such mines. The subscribers (who take one share each) are—J. Clarke, 66, Bloomfield-road, Bow; Charles H. Thompson, Union-court; Andrew Stein, 17, Great Winchester-street; Arthur G. Thompson, 59, Mark-lane; W. Thompson, 22, Bishopsgate-street; Hugh R. Fletcher, 17, Laurence Pountney-lane; W. P. Powell, Philpot-lane.

**HALL AND BOARDMAN (Limited).**—Capital 30,000*l.*, in shares of 1*l.* To acquire the freehold and leasehold coal mines and collieries situate in the parishes of Gresley and Swadincote, in the county of Derby, and known as the Swadincote and Cadley Hill Collieries, and also the live and dead stock, engines, machinery, &c., now carried on by John Hall, under the style of Hall and Boardman. The subscribers (who take one share each) are—John Hall, Hastingden; Margaret Hall, Hastingden; J. Woodcock, Hastingden; Elizabeth Hall, Hastingden; Margaret Hall, Hastingden; Arthur Eley, Swadincote; Alfred Eley, Swadincote.

**CHELSEA ELECTRICITY SUPPLY COMPANY.**—Capital 100,500*l.*, in 20,000 shares of 5*l.*, and 500 founders' shares of 1*l.* To carry on the business of electric, practical, and mechanical engineers. The subscribers (who take one share each) are—T. V. Lister, 38, Cadogan-square; F. Rawson, Queen Victoria-street; Francis Bolton, Grosvenor-square; Alfred Edwards Taylor, Michael-grove, S.W.; Jeffrey C. St. Quinton, the Hall, Blackheath; Otway Woodhouse, Upper Phillimore Gardens; H. T. Davies, Gayton-road, Hampstead.

**WILLIAM INGHAM AND SONS (Limited).**—Capital 24,000*l.*, in shares of 20*l.* To purchase, acquire, and work a cotton-spinning mill and weaving-shed, situated at Fleetwood-street, Padham, in the county of Lancashire, known as Albert Mills, and the machinery, &c. The subscribers (who take one share each) are—John Ingham, 104, Burnley-road; Henry Ingham, Church-street; James Ingham, Burnley-road; Elisha Ingham, Burnley-road; Ellen Ingham, Burnley-road; C. Ingham, Church-street; Ann Ingham, Burnley-road; Ann Ingham, Church-street.

**THE SANTIAGO (ARGENTINE) ESTATE AND SUGAR FACTORIES (Limited).**—Capital 300,000*l.*, in shares of 10*l.* To purchase the estate known as the Contreras Estate, situate near Santiago, in the Argentine Republic, and the lands, sugar factory, plantations, machinery, &c., and to carry on same. The subscribers (who take one share each) are—John Barker, Grove Park, Chiswell; John S. Rivolia, 83, Cornhill; A. Challenor, 34, Alfred-place, Bedford-square; J. B. Elliot, 105, Forest-road, Dalston; Wm. Brat, St. George's-terrace, Regent's Park; W. W. Burgess, 13, Newton-road, Bayswater; H. Corvis, 68, Cheapside.

**EAST BOTALLACK.**—At the meeting on Nov. 14 the accounts showed a debit balance of 186*l.* 10*s.* 8*d.*, to meet which a call of 1*s.* 6*d.* per share was made. The pursuer (Mr. John Hollow) stated that, owing to a scarcity of water for stamps, he had sold very little tin, but expected to meet the labour cost by monthly sales during the next few months. Great expectations are entertained of the Ballewidden "Awboys" lode now being opened up, as will be seen from the following report. It is also gratifying to note that the lords have remitted rent during pleasure, to assist the adventurers over this period of depression. Capt. Thos. Trahair, in his report (Nov. 14), says:—We have driven the cross-cut south, at the 12 fms. level, 15 fms. We cut the South Ballewidden lode, and have driven west on the course of the lode 3 fms.; for that distance the lode has been unproductive, but the depth here is only 7 fms. from surface. The 12 fms. level west, on the "Awboys" lode, has been driven from shaft 10 fms., the lode worth from 3*l.* to 4*l.* per fathom. The stopes in the back of this level are working at 1*l.* in 1*l.* The 12 fms. level east has been driven 14 fms. from shaft; lode worth from 4*l.* to 5*l.* per fathom. The lode in the stopes in the back of this level is 4 ft. wide, equal to 10 tons of tinstuff per fathom, and pro-

ducing 90 lbs. of tin to the ton of tinstuff. If the water does not increase underground I think we can put men to work in the back of the 12 fms. level to keep eight heads of stamps going through the winter months. We therefore fully expect to meet the cost of the mine. With such an excellent lode at so shallow a depth I think we ought at once to sink to the next level, where I fully expect the lode will still further improve. In conclusion, I may mention, as a most remarkable and cheering fact, that during the past month three men have raised 20*l.* worth of tin at a cost of 9*l.* 17*s.*, and I think no other evidence is needed to show that we have a most valuable property which only needs development.

## Meetings of Public Companies.

## MONTANA COMPANY.

A special general meeting of shareholders was held at the Cannon-street Hotel, on Wednesday.

Mr. N. STORY-MASKELYNE, M.P., in the chair.

The CHAIRMAN stated that he was sorry to have to tell them that he had just discovered that a mistake had arisen with regard to calling the meeting. It appeared that not sufficient notice had been given to the shareholders to make the meeting formal. It was necessary that six clear days' notice should be given, and the secretary had called the meeting on the sixth, instead of the seventh day. However, he hoped that they would consider the affairs of the company, and any resolutions they might carry could be submitted to a formally called meeting in a week's time. He hoped they would excuse this unfortunate mistake, and accept his apology.

The SECRETARY then read the notice convening the meeting.

The CHAIRMAN then said that it was needless for him to say much, as they had in their hands a summary of the result of his visit, together with Mr. J. R. Armitage, to the mine. Since they had returned he could assure them they had been hard at work. He had other business besides the business of the company to attend to; but it had been put on one side, as well as other enjoyments, in order that he might do his duty toward them. When they arrived at the mine they went into a vast number of questions, and when they left they came away feeling that with proper management the mine could be made to pay, and that they had great prospects for the future. They must, of course, remember that mining was an adventure, and that they could not dig down and bring up gold as certainly as they could draw from their bankers. They must throw a little bread upon the water, in order that they might hereafter obtain corn. He had to confess to disappointment in that the hopes built on the ground of Mr. Darlington's report had not been fulfilled. It became their chief duty, however, on arriving at the mine to look into the question of management. That he was bound to say they found to be unsatisfactory. He felt that to a great extent he had to blame himself for that. At the time of the appointment of their manager he (the Chairman) had stated that he had not much experience in mining matters; but he thought he could estimate the value of a man, related to some of his friends, Mr. Attwood, as a mining engineer. At the time Mr. Attwood was appointed he did not think that he could have recommended a more competent man. He had not, however, done justice to the opinions he had concerning him. He thought the shareholders ought to know that the board had intentions of dealing with the matter of management at once. He did not wish to say anything more on that point just now, but asked the shareholders to trust the matter to the board. If they pressed him he could go further into this matter, but would rather not do so until he had heard the result of the meeting. He thought it was a rash thing to talk about a property in the way it had been talked about in the book which they had. They thought it was not necessary to give all the details of their report, which would only be wearisome; but they had all those details, and could give them to the shareholders if they wished for them. He was not going to say that their management at home was perfect. It was the first time he had had anything to do with a mining company. He had told them of one of his faults, and he would like to say that he was always as ready to regret as he was to acknowledge his errors. He could assure them that it was not for want of thought, or care, or attention that they had in any way failed. They had many difficulties to contend with, and they had met them to the best of their ability. If they were charged with being deficient they could reply that it was only because "story they had none to tell." With regard to the time they were at the mine, he could only say that they were conscientiously employed in examining it, and that they only wrote home two letters, which were strictly confidential, and, therefore, it was impossible for the directors to give them any information. They were there now, however, and would be pleased to answer any questions which might be put to them.

Mr. PHILLIPPS said that they met under great disadvantages, and he feared that most of them felt great indignation, and he must confess it was quite natural that it should be so. What they had to do was, as men of business, to look at the question before them, and to report to the shareholders. He was best to be done under the circumstances. He, however, would remind them that they should not allow their feelings to warp their judgment. There was one thing which he had not mentioned in his remarks, and for which he had not taken credit to himself and the board, for which they justly deserved credit, and that was that they had called together some of the largest shareholders and consulted with them as to what was best to be done. Previous to meeting the board these shareholders met together, and they unanimously came to the conclusion that no shareholder could or ought to be satisfied without a full investigation being made into all the affairs of the company. He was also pleased to be able to state that everything that they recommended was accepted by the board. He could second the remarks of the Chairman in one point, that it was undesirable that they should say anything too strong of the board or of the management at the mine. There existed perfect harmony between the board and the largest shareholders. He would conclude by moving, "That a committee be appointed of not fewer than five or more than seven shareholders to enquire generally into the past proceedings of the company, as well as its present position, and to report to an adjournment of the present meeting, on a day to be fixed by the committee, on the measures which, in the judgment of the committee, it would be desirable to adopt. That every facility be afforded by the directors and officials of the company to such committee, and that the committee be empowered to examine all books and documents, and to employ any professional assistance they may deem necessary in the progress of the enquiry."

Mr. OWEN, who said that for some considerable time back he had occupied much of his time in looking into the affairs of the mine, desired to make a few remarks. In the course of his watching over the mine he had got a good deal of information regarding the management, which he had made known to the board from time to time. He had come to the conclusion that that management was radically wrong. However, he was happy to say that they had now got to a point when they could say daylight was at hand. He had been brought lately into great contact with the directors, and they had completely changed in their behaviour to him. With regard to the meeting of the largest shareholders, he would state that they represented one-third of the entire capital of the company. There were 14 of them present, and they were unanimous in coming to the conclusion that they would report to the shareholders, saying in plain words with open arms, as it were. Respecting the gentlemen they proposed to put on the committee, he could say they were not going into the matter with their minds fully made up; but they would carefully examine all points. There was much in the report he did not approve of, but the main points were certainly favourable. He concluded by seconding the resolution.

Mr. BARRETT said he should like to make a few remarks as an original shareholder. He had come to that meeting with feelings of regret. He thought the speech made had been a very pitiable one. He came there confessing his fault, and trusting himself upon the mercy of the shareholders, and he had done what he ought not to have done, and left undone that which he ought to have done. He would ask the Chairman as a reasonable man if after confessing that the management was wrong he could come there, and tell them that at that moment this man, Mr. Attwood, was managing this mine. They knew that things were going wrong at this mine, and yet they had not the moral courage to say to that man go about your business. He was not a man to denounce anyone because of a mistake; but where they had positive knowledge, such as the directors had, he thought they were culpable, and to blame if they did not act upon it.

Mr. McCulloch said he was himself only a small shareholder, but he represented the shareholders of Liverpool, and he would like to ask a question or two in all fairness to the board. He thought that if they had a valuable property it would bear investigation. He would like to know who it was that employed Mr. Darlington to report on the mine. He was very pleased to hear that Mr. Attwood's services were likely to be dispensed with, and the sooner they investigate the affairs of the company the better.

Mr. MARTIN SMITH remarked that there was a great divergence of opinion manifested in the reports of Mr. Darlington and Mr. Hamilton Smith. They set them a riddle which he for one could not solve, and he would like to know which of these two gentlemen was right. He objected to the suggestion that a third gentleman should be asked to examine the property. The most business-like thing to do, he thought, was to put both those two men together and ask them to frame a joint report. He thought that these gentlemen were both very able engineers.

The CHAIRMAN, in reply to the remarks which had been made, said that Mr. Barrett thought he acknowledged one mistake that he necessarily lost to himself the blame for the present condition of the company. He did nothing of the kind, however, and he must in self-respect deny the imputation. He had done his very best for the company, and he thought that he had not exerted a brainless effort to serve the company. Mr. Crowther said that long ago he had—or in as many words—put information into our hands that ought to have led us to discharge Mr. Attwood. He denied that, and it was only just as they were leaving for America that they had any really positive information. At the formation of the company an agreement had been made with Mr. Attwood to act as manager, but through an error on the part of their solicitor a clause had been omitted stating when the contract should expire. It was only on information of a very positive character that he could be dismissed. When they arrived at the mine they thoroughly investigated the charges made against Mr. Attwood, and the verdict they came to was that some of them were not proven. He felt he was bound to state that as he was in a position in which he had to do justice between man and man. With regard to Mr. Darlington's appointment he explained that he was sent out at the instance of the Joint-Stock Association. He had no reason to believe that his report was not a thoroughly honest one, and he did not think that he had purposely deceived them in any way. He did not believe that the hopes founded on that report were all to be blighted, and thought they ought to find matters turn out very differently to what Mr. Hamilton Smith would lead them to suppose. With regard to the committee of inspection nothing could be more agreeable to the board, and they hailed such a thing.

The resolution was then put to the meeting and carried unanimously.

The following gentlemen were then proposed to form the committee, and were duly elected:—Messrs. F. Crowther, F. Youle, Mayes, Phillips, and Baylis. The CHAIRMAN, in reply to a shareholder, stated that it required 14 shareholders to confirm the resolutions at next meeting. A vote of thanks to the Chairman terminated the proceedings.

## CHILE GOLD MINING COMPANY.

An extraordinary general meeting of shareholders was held at the Cannon-street Hotel on Tuesday.—Mr. HUGH WATT in the chair.

Mr. BROWN (the solicitor) read the notice calling the meeting, and also the report of the committee appointed by the shareholders at the meeting held on Oct. 24. The following is an abstract of this report:—The committee secured the dismissal of the winding-up petition of Mr. Maxwell, but no sooner was this done than a similar petition was presented by Mr. Tandoval; and, therefore, the committee was induced to file a petition so as to prevent creditors driving the company into liquidation before the committee could possibly raise funds sufficient to pay all claims. Owing to the Articles of the company having been altered from 7 to 14 days' notice of meeting, the committee had been seriously retarded in carrying through their plans for reconstruction. The committee were convinced that the only course possible so as to preclude the creditors from rendering their efforts for reconstruction abortive was to adopt voluntary liquidation. Considering that they would best be serving the interests of the shareholders by at once maturing their plans, the committee state that, immediately on passing the resolutions, they will be in a position on the next day to register the new company. The committee thank their numerous friends for their response of 2*d.* per share upon their holding, by means of which they hope to disburse all charges connected with the formation of the new company, and secure a most valuable property. The committee submit the draft outline of their plan for reconstruction. They propose that the claims of all creditors in this country will be paid by the new company within a period of three months, and those in Venezuela as may be arranged by representatives appointed to act for the company there. The debenture-holders will occupy the same position and be subject to the same conditions in the new company as in the old, with the additional security of the new uncalled capital. The shareholder for every 1*l.* share in the old company will receive a 1*l.* share in the new company, with 15*s.* credited as paid thereon, with 1*s.* payable on or before Dec. 6, and the balance by calls of not more than 1*s.* each upon one month's notice. The committee believe that 2*d.* per share will be sufficient to liquidate all the debts, and purchase the machinery, stamps, &c., necessary to liquidate the present output, and leave the remaining 3*d.* per share to liquidate the debenture debt should the produce of the mine not wholly suffice for that purpose, so as to rid the company of a debt upon which a very high rate of interest has to be paid. The committee have taken great pains to have collected every possible item of information concerning the value of the property. They hope the working of Austin's No. 9 will be secured, but have delayed taking steps to bring about this result pending financial arrangements. The new company will be able to carry on operations, having a perfect control as possible over the operations of the shareholders.

Mr. WATT, in rising to address the shareholders, said he had no intention of making a long speech, as as much information as possible had been printed by the committee, and was in their hands. At the last meeting the directors stated that they had not been able to purchase the report made by the late manager of the El Callao Mine upon their property. This report he considered as very material, because it showed the value of their property. It was the desire of the committee to save this property. The causes of its failure in the past was because he was not there to see to it; but there was no doubt of the value of the mine being considerable, and the question for them to consider was how to save it. Certainly the information received by the board concerning the mine was different from what he had. Whatever the debts of the company might be, whether 30,000*l.* or 60,000*l.*, it could not be denied that the company was now in very low water; in fact, no company could be in a worse condition than this was. Some present might have come to the conclusion that he desired to take the chair at that meeting in the place of Mr. Harvey, but he assured them that such was not the case for him; but their solicitor was of the opinion that they, the committee appointed by the shareholders, should take the initiative in this matter. With regard to the value of their property, he had obtained reports from Mr. James Penberthy, extracts from letters from Messrs. Mönch, Kraft, and Co., Mr. Nicholson, Capt. Pearce, Mr. H. Sprick, Mr. J. B. Ivey, and from a private letter from Ciudad Bolívar. As these particulars were important he would ask their solicitor to read them.

Mr. BROWN then proceeded to read the reports. Mr. James Penberthy in his report stated that having examined the property he was pleased with the works that had been completed, as well as that in course of completion. When Mr. Nicholson took charge of the mine there existed only a 40-head stamping-mill, but 20 stamps were useless, and had to be taken out, and a new battery foundation laid 14 ft. in the ground, when the same 20 heads were replaced. An addition of 20 heads was then made, making a total of 60 heads, capable of stamping 100 tons of quartz per 24 hours. Two new Gallows tubular boilers were just added, capable of steaming an engine large enough to drive 100 heads. The only thing required to make this department perfect was a 100-horse power steam-engine, which is in course of erection. They would then be in a position to add another 40 stamps, making a total of 100 heads stamping-mill, capable of stamping 150 to 170 tons per 24 hours, which at their present low grade ore, would yield a monthly return of 5000 to 5500 ozs. of gold. The Sanicero engine-shaft had been sunk about 500 ft.; the lode about 3½ ft. wide, showing free gold throughout, was well defined, and was producing, he thought, about 2 ozs. per ton. No. 8½ drift had been driven east about 540 ft. The lode in the drift was 14 ft. wide, and of a very free nature, easy for exploring. In concluding his report, Mr. Penberthy said he would like to consider the company's position, and that the working costs should not exceed 6000*l.* per month. The writer of a letter from Ciudad Bolívar confirms the views expressed by Mönch, Kraft, and Co., as to the value of the Chile Mine, and goes on to say that he believes the mine is being worked economically, and is still producing about 1800 ozs. per month. He says that everyone there competent to judge is of the opinion that if the debts were cleared off and some working capital found the mine would materially improve in production without increase of expenses.

Mr. WATT then went on to say that the model of the mine which he had made and was there before them, would show at once that they had now opened up much ground, and that, in fact, they had a developed mine, and one which was well worth saving, whether the sum required for that purpose was 10,000*l.* or 20,000*l.* He reminded them that when the carcasses was there the vultures gathered round, and he thought, no doubt, that there were vultures ready to pounce upon their property. The cheapest way to save the mine was by voluntary liquidation. In the reports which had been read to them they would be able to derive what had been the work of the committee. The Chile Mine, he said, was a mine of the future. In its present condition the company could not continue its business—it must be wound up. A sheriff's officer was now in possession of their offices for rent. If that was not paid the whole property would be confiscated—there were no assets in this country. Speaking of the men employed at the mine, he said that they were obtained from Cornwall, and that they went out to Venezuela, leaving their wives and families behind under certain contracts. Part of those contracts were that their wives should receive a certain sum of money from the company monthly. But this the company will not now do, consequently their wives were great dissatisfaction out at the mine; the committee had, however, paid them, and he reminded them that with regard to the liquidation and reconstruction there was no "jobbery," there was no vendor to pay, all the expenses there would be the registration fees and the solicitor's charges; no one else would get anything out of it. The committee had worked hard; they had, in fact, been working 18 hours a day. The point really was should the liquidator be appointed by the shareholders or by the judge. The gentleman whom they had to propose was thoroughly competent to fulfil the duties, and he asked no remuneration whatever. Everything was ready should the resolution be passed, to register the new company, and to call a meeting, and the notices calling the extraordinary meeting for Dec. 3 were also ready to go out that night; therefore, he thought that they could not be blamed for negligence. The resolution he was about to propose was merely of a formal character, as they meant to pay every debt. The committee represented a large proportion of the shareholders and debenture-holders. With regard to the debenture-holders he had ascertained that their deed was of no more value than the piece of paper he held in his hand; it was therefore to their interests to save the property. He would therefore conclude by moving—"That it has been proved to the satisfaction of the committee that it cannot be rescued, and its liabilities continue its business, and that it is advisable to wind up the same."

Mr. JAMES STEWART seconded the motion.

Mr. HARVEY, who said that he had been the Chairman of the company for the last two years, explained the reason why Mr. Penberthy's report had not been placed before the shareholders at the last meeting, as stated by Mr. Watt. Mr. Penberthy, he stated, wanted 50 guineas for his report, and he and the other directors did not think, considering the state of the company's finances, that they would be justified in giving that sum. It seemed to him that Mr. Watt by his remarks pointed to mismanagement on the part of the directors. He could quite understand why the shareholders should think so, because they had not received any dividends; but not one, who like Mr. Watt, had the opportunity afforded him of thoroughly examining the books, he asked them what better proof they could have that they had managed well than the fact gathered from the reports that the mine was well developed? Mr. Nicholson was present, and no doubt he would be able to give them very valuable information as to what had been done at the mine, as he had spent a large sum of money on behalf of the company. They had crushed about 24,000 tons of quartz for about 100,000*l.*, and he knew that at El Callao Mine in 1881 the same amount of work had cost them about 215,000*l.* With regard to the workmen it was impossible for them there, as it was for anyone anywhere to keep a staff of workmen employed and give them a third of what they could get elsewhere. There was a keen competition going on for a limited number of miners, and when such was the case they must pay the men the same as others if they were to keep them. He contended that under the management of their directors the company had been worked more economically than any other mine out in Venezuela. He went on to say he had been very much struck with the action of the committee. When they were appointed he had tendered to them his services, but he had never once had an interview with any of them. They were at perfect liberty to come to the offices and examine the books of the company, but they had never done so. Until he came into the room he had no definite idea of what was to be done. It was true a circular had been sent out, and they had no objection to that except with regard to the charge of mismanagement. That he must deny, and he would challenge anybody who was placed in their position to do better for the company than they had done. They (the directors) had a large stake in the concern; they had put into it far more than they had ever drawn out of it, and as to the regularity of the meeting of the board the attendance book would show that. They had lost heavily, but they would see how the next board w







The cargo No. 7 of San Andres the lot is 50 centimetres broad all in ore of a fair class. In pozos No. 10 of San Andres the ore is of a better class, but the width of the vein is only 50 centimetres. We sold in public sale, Oct. 30, about 365 cargoes for \$5681, and during the week ending Nov. 1 we sent to Duran 384 cargoes and sold 1 carga 4 arrobas 10 lbs. of bonito. The remittance to Duran

Perhaps the most striking discovery made by Mr. Pulkrook, regarded from a scientific point of view, was—that the downfall of many mining companies has been caused by their having mills erected without regard to the class of ore they had to treat, by trying new patents, by ordering mills without plans and specifications to scale, whereby the various parts on arrival at the remote districts where the mines were situated were found not to fit, and by mills being erected where no water was to be had half the year, and by means

In an appendix, the author describes a supposed deep sea fish found at Cole Harbour Dyke. It had been thrown ashore by a storm. From its general form and the tentacles on its head, the author has suggested to him its affinity with the *lophius piscatorius*, but close study led him to the conclusion that it was more nearly allied to ceratias described by Gunther in his "Introduction to the Study of Fishes."

LEAD ORES.				
Date.	Mines.	Tons.	Price per ton.	Purchasers.
Nov. 17—	Foxdale.....	100	\$ 8 18 6	Panther Lead Co.

  

BLACK TIN.				
Date.	Mines.	Tons.	Price per ton.	Purchasers.
Nov. 19—	Phoenix United .....	23	442 5 0	Redruth Smelting Co.



## PROVINCIAL STOCK AND SHARE MARKETS.

**CORNISH MINE SHARE MARKET.**—Mr. S. J. DAVEY, mine shareholder, Redruth (Nov. 20) writes:—We have had a firmer market this week, with more enquiry for shares at better prices. Dolcoath advanced 2, East Pool 1, and Tincroft 1. Wheal Agar shares quickly after Friday's accident, fell 1, but this fall has since been recovered. To-day Dolcoath, East Pool, Carn Brea, West Frances, Tincroft, and Wheal Agar are chiefly in request. Subjoined are the closing prices:—Carn Brea, 3½ to 3¾; Cook's Kitchen, 9 to 11; Dolcoath, 67½ to 68½; East Pool, 39½ to 40½; Killfretth, ¾ to ¾; New Cook's Kitchen, ¾ to 1; New Kitty, 1 to 1¼; North Busy, 1 to 1¼; Pedn-a-drea, 1½ to 1¾; Polberro, 2 to 2¼; South Condurrow, 8 to 8½; South Crofty, 2½ to 3; South Frances, 6¼ to 6½; Tincroft, 7½ to 8; Trevaunance, 1½ to 1¾; West Basset, 1¾ to 2; West Frances, 5¼ to 5½; West Kitty, 3 to 3½; West Polberro, ¾ to ¾; West Seton, 2 to 2½; Wheal Agar, 17 to 17½; Wheal Grenville, 5½ to 6; Wheal Kitty, ¾ to ¾; Wheal Uny, ¾ to ¾.

—Messrs. ABBOTT and WICKETT, stock and share brokers, Redruth (Nov. 20), write:—There has not been much alteration in the tin market this week, but shares in most mines are much firmer, and Dolcoath, East Pool, Tincroft, West Frances, and Wheal Basset show a material improvement. Closing prices herewith:—Camborne Vein, 5s. to 6s.; Carn Brea, 3½ to 3¾; Cook's Kitchen, 9 to 11; Dolcoath, 68 to 68½; East Blue Hills, ¾ to ¾; East Pool, 39½ to 40; Killfretth, ¾ to ¾; New Cook's Kitchen, ¾ to 1; New Kitty, 1 to 1¼; North Busy, 2 to 2½; Pedn-a-drea, 1½ to 1¾; Polberro, 2 to 2¼; South Condurrow, 8 to 8½; South Crofty, 2½ to 3; South Frances, 6¼ to 6½; Tincroft, 7½ to 8; Trevaunance, 1½ to 1¾; West Basset, 1¾ to 2; West Frances, 5¼ to 5½; West Kitty, 3 to 3½; West Polberro, ¾ to ¾; West Seton, 2 to 2½; Wheal Agar, 17 to 17½; Wheal Grenville, 5½ to 6; Wheal Kitty, ¾ to ¾; Wheal Uny, ¾ to ¾.

—Mr. M. W. BAWDEN, Liskeard (Nov. 22), writes:—The mining market continues steady, with but little change or variation in prices, and shares more firmly held. At New South Cornish meeting, held on Tuesday, a call of 1s. 3d. per 10,000th share was made. Subjoined are the closing quotations:—Bedford United, 1½ to 1¾; Blue Hills, ¾ to ¾; Carn Brea, 3½ to 3¾; Cook's Kitchen, 9 to 11; Dolcoath, 68 to 68½; Devon Consols, 1½ to 1¾; East Pool, 39½ to 40; Killfretth, ¾ to ¾; New Cook's Kitchen, ¾ to 1; New Kitty, 1 to 1¼; North Busy, 2 to 2½; Pedn-a-drea, 1½ to 1¾; Polberro, 2 to 2¼; South Condurrow, 8 to 8½; South Crofty, 2½ to 3; South Frances, 6¼ to 6½; Tincroft, 7½ to 8; Trevaunance, 1½ to 1¾; West Basset, 1¾ to 2; West Frances, 5¼ to 5½; West Kitty, 3 to 3½; West Polberro, ¾ to ¾; West Seton, 2 to 2½; Wheal Agar, 17 to 17½; Wheal Grenville, 5½ to 6; Wheal Kitty, ¾ to ¾; Wheal Uny, ¾ to ¾.

—Mr. JOHN CARTER, mine shareholder, Camborne (Nov. 20), writes:—The share market has been steady this week with a rather better demand for Dolcoath, East Pool, Wheal Agar, West Basset, and Tincroft. The following are the closing quotations:—Carn Brea, 3½ to 3¾; Cook's Kitchen, 9 to 11; Dolcoath, 68 to 68½; East Blue Hills, ¾ to ¾; East Pool, 39½ to 40; Killfretth, ¾ to ¾; New Cook's Kitchen, ¾ to 1; New Kitty, 1 to 1¼; North Busy, 2 to 2½; Pedn-a-drea, 1½ to 1¾; Polberro, 2 to 2¼; South Condurrow, 8 to 8½; South Crofty, 2½ to 3; South Frances, 6¼ to 6½; Tincroft, 7½ to 8; Trevaunance, 1½ to 1¾; West Basset, 1¾ to 2; West Frances, 5¼ to 5½; West Kitty, 3 to 3½; West Polberro, ¾ to ¾; West Seton, 2 to 2½; Wheal Agar, 17 to 17½; Wheal Grenville, 5½ to 6; Wheal Kitty, ¾ to ¾; Wheal Uny, ¾ to ¾.

**MANCHESTER.**—Messrs. JOSEPH R. and W. P. BAINES, share-brokers, Queen's Chambers, Market-street (Nov. 20), write:—The depression which has, owing to the course of money, been the prevailing feature in the markets for some weeks past has given place, under the influence of money going more plentiful and cheaper, to a much more healthy and buoyant feeling, in which nearly all classes of investments have participated. Railway traffic returns, though by no means good on the whole, are taken to give signs of better things, and coupled with the influence above named have in some cases materially assisted values. The effect of ease in money is apparently most exhibited in the market for foreign funds, and colonial Government stocks, &c. The former series, with the exception of a few, are all at a premium, and the latter, with the exception of a few, are all at a discount. The aggregate of the business done here in the several series of miscellaneous shares is in excess of that for last and recent weeks.

BANKS have changed hands freely, prices realised being in most instances fully up to, or in advance of, those lately obtained. One exception to this may be noted—Consolidated, which fell away to 7 sellers, at which a couple of dealings are marked, but they recovered as quickly as they declined, and though no transaction is recorded since they were done at 7 they now quote 7½ to 7¾, again, showing no alteration from figures at which they stood last week. Higher: Manchester and Liverpool District, ¾; and Manchester and Salford, ½. Lower: National Provincial New, ¾. Sellers of Manchester and County and Manchester Joint-Stock have advanced their figures, without, however, being followed on the buyer's side.

INSURANCE: More doing, but the total is made up of solitary dealings in several concerns, excepting the case of Lancashire, in which, as we have mentioned a few times, the market is very active. Higher: British and Foreign Marine, ¾; Liverpool and London and Globe, ½; and Sea, ½. Lower: Lancashire, ½.

COAL, IRON, & CEMENT: A little more activity, but still little business passing. Changes of quotations contradictory. Higher: Pearson and Knowles, B, 1 to 1½; Palmer's Shipbuilding, A, ¾; ditto, B, ¾; Earle's Shipbuilding, ¾; Rio Tinto, ¾; and Tharsis Sulphur, &c., ¾. Lower: John Brown's, 1; Staveley, A, ¾ to ¾; West Cumberland, ¾ to 1; Paulinell Copper, ¾; and Ebbw Vale, ¾.

COTTON SPINNING, &c.—Nothing abnormal to report; market is steady without special feature. Higher: Anglo-Siam, 9d.; and United, ¾. Lower: Miscellaneous. A rally of 2 to 3 in Gas Light and Coke Ordinary, and a further fall of ¾ in Manchester Gas, &c., B, comprise the whole of the movements worthy of notice.

RAILWAYS generally better under the influence of cheaper money, notably Brighton, South-Eastern, and Great Northern &c. The leading heavy stocks are steady, except the case of Lancashire, in which, as we have mentioned a few times, the market is very active. Higher: British and Foreign Marine, ¾; Liverpool and London and Globe, ½; and Sea, ½. Lower: Lancashire, ½.

## SCOTCH MINING AND INDUSTRIAL COMPANIES SHARE MARKETS.

**STIRLING.**—Mr. J. GRANT MACLEAN, stockbroker and ironbroker (Nov. 20), writes:—During the past week the markets have been quiet, and prices do not show much alteration. There is no change in the state of trade to influence prices; but the money market is easier.

In shares of coal, iron, and steel companies prices are steady. Bull's Iron are 4s. to 4½; Cardiff and Swansea, 4s. to 4½; Marbella, 4s. to 4½; and West Cumberland, 4s. to 4½.

In shares of foreign copper concerns the principal alteration is a decline in Paulinell's to 6s. Tharsis have been sold from 5s. 15s. to 5s. 15s.; Bratsbergs are 2s. 6d. to 2s. 6d.; Iceland Sulphur, 6s. 3d. to 6s. 3d.; and Rio Tinto, 12½ to 14.

In shares of home mines there has not been much business doing. New Terras wanted. The meeting of the Trevaunance United will be on Nov. 28. Colla-combe Consols are at 2s. 6d.; Ecton, 3s. 6d. to 4s. 6d.; Gunnislake (Oltters), 6s. to 6s.; Leadhills, 2s. to 2s.; Monkton Manganese, 12s. 6d. to 12s. 6d.; New Wy Valley, 3s. 6d.; Old shepherds, 10s. to 12s.; Prince of Wales, 6s. to 6s.; Standard Lead, 2s. 6d.; Trevaunance, 6s. to 7s.; Wearside, 12s. 6d. to 12s. 6d.; West Polberro, 12s. 6d. to 12s. 6d.; Wheal Basset, 4s. to 4s.; and Wheal Lusk, 3d.

In shares of gold and silver mines there has been a fair amount of business done. The principal business has been in Montanas, which declined from 2s. to 10s., on the issue of the report showing the value of the mine had been much over estimated. The capital must therefore have been fixed too high, and the value of the shares becomes problematical. A committee of investigation has been appointed. The latest reports from the mine, however, show an improvement in the ore. Kibbourn shares are firmer at 3s. to 4s.; it appears satisfactory returns have been made by parties recently returned from the mine; the whole of the machinery has been in operation since the new year, if not before. The shares are also in favour, as the returns from the mine are improving, and it is

expected the company will now be put on a sound financial basis. Asia Minora are 2s. 6d. to 2s. 6d.; Balkis, 2s. to 4s.; Cartago, 5s. to 7s.; Callao Bld, 12s. to 14s.; Denvers, 1s. 6d. to 2s.; Graskop No. 2, 30s.; Gold Coast (Ordinary), 3s. to 4s.; ditto (Preference), 12s.; Indian Consolidated, 2s. 6d. to 3s.; Javali, 3s. to 4s.; La Plata, 4s. to 6s.; Mysore, 30s. to 32s. 6d.; Nine Reefs, 3s. 9d. to 5s.; Nanyudroga, 9s. to 10s.; Port Phillip, 2s. to 3s.; Santa Barbara, 20s. to 25s.; Schwab's Gully, 5½ to 5¾; Teocoma, 1s. 3d.; and Victoria, 6s. to 8s.

In shares of local and miscellaneous companies the principal alteration is an advance on Young's Paraffin on a better dividend being expected next year. Lanark Oil and Midlothians are both easier, but should be worth attention. Elmore and Company (Debtentures) are at 45; Home Mine Trust, 18s. 9d. to 21s. 3d.; Lawer's Chemicals, 5; Nobel's Explosives, 18½ to 19½; and Val de Travers Asphalt Paving, 7½ to 7¾.

**EDINBURGH.**—Messrs. THOS. MILLER and SONS, stock and share brokers, Princes-street (Nov. 19), write:—Since last report the stock market has been unusually dull. Railways show no change requiring notice. In Banks, National have been depressed, and Royal is also lower. British Linen have declined from 310 to 308½. Union have recovered to a fractional extent. In investment shares Scottish American investments are rather lower, and Scottish American mortgages have risen 1s. 6d. Scottish Trust and Loan of Ceylon, 10½ shares, with 3½ paid, have been done at 70s. discount. In mines, Arizona are lower. The Arizona Trust shares, 1½ paid, changed hands yesterday at 10s. 6d., 11s., and then again at 10s. 6d. Tharsis have declined slightly. Cairntrable Gas Coal, Clyde Coal, and Steel Company all mark some advance. Montanas fell sharply on the report, and went to 18s. 3d.; but they have rallied to 12s. In oil shares Broxburn and Burntisland are higher, while Dalmeny, Lanark, Midlothian, Pumpherton, and West Lothian are lower. Insurance shares have been quiet; but Edinburgh Life, North British and Mercantile, and Scottish Union "A" are all higher.

## IRISH MINING AND MISCELLANEOUS COMPANIES SHARE MARKET.

**CORK.**—Messrs. J. H. CARROLL and SONS, stock and share brokers South Mall (Nov. 19), write:—Markets were steady to-day. Great Southern and Western Original stock brought 115½, and Wicklows, 57½. Great Northern remain 116½; Bandon, 77½; and Bantry Extension shares 10. Bank of Ireland stock sold at 339½; National at 25 to 25 16ths; Hibernians at 21 to 20½; and Munster Bank shares at 5½. Provincial were also done at 38. Alliance Gas shares changed hands at 19 5-16ths; and Dublin Tramways at 9 3-16ths to 9½. Cork Gas shares remain 7½; Packets, 10s. to 13s. 9d. Lyons and Co.'s shares, fully-paid, 6½; and the 4½ paid shares, 6s. Leys on offer at 5½. Refreshment Room shares, and Arnett and Co. Brewery shares unchanged. Cork Harbour Board 4½ per cent. bonds were offered at 103; and Corporation Stock asked for at 99½.

## Mining Correspondence.

## BRITISH MINES.

**BEDFORD UNITED.**—H. Trescow, Nov. 18: The lode in the 62 west continues to look very promising, strong and steadily in appearance, and progress is being made in driving the end; the lode is worth 8½ per fathom. In the 42 west the lode is looking very fine, and worth 12½ per fm. All the other points are looking much the same as they have been for some time.

**CASHWELL LEAD.**—John Peart, Nov. 15: The vein in heading next to drift forehad going west in copper has still continues easy to work, and is worth 1 ton of lead ore per fathom. The heading coming east in the above stratum is yielding some very good ore. The vein is a good width, fully 4 ft. in place, and is worth 1½ ton of lead ore per fathom. The drift going west in copper has been improving, a little more vein, and some more ore. In the east end on the above stratum we are making a rise. It is very hard and slow to work, and the vein is both poor and hard. I expect if the weather keeps open to be able to sample 40 tons in a fortnight.

**CARN CAMBORNE.**—W. C. Vivian, Nov. 19: My remarks in reference to the lode in the 105 west when writing to you yesterday are fully applicable to the appearances in the same lode to-day. Next week we intend to commence raising bringings in the back, whilst continuing to drive the level towards the central cross-course, by which we hope to make further discoveries of value. There is no lode yet cut in the 105 cross-cut south, the end being at present in a fine grained blue elvan rock, and not much short of the position of the line of underlay of the south lode in the back of the 55, the point we are desirous of proving.

—W. C. Vivian, Nov. 20: There is nothing new to remark upon in the mine to-day.

**CREIGIOG.**—H. Hotchkiss, Nov. 19: The lode in the forebreast of the 130 east is 3 ft. wide, sparsely with blende. In the 130 west we are carrying 4 ft. of the lode in this driving, and there is still more lode standing on the south side. The character of the lode itself here is chiefly made up of spar, with a little blende mixed therein.

**DEVON FRIENDSHIP.**—F. R. W. Daw, Nov. 20: The value of the several bargains underground are about the same as reported to you last week.

**DERSBY.**—J. Roberts, W. Sandoe, Nov. 19: We completed the draining of the water by the time we reported we should do last week, and we put men directly to finish cutting down the ground at the No. 5, which had not been completed when the engine was stopped, but we hope it will be now completed in a day or two. The shaft is now made quite complete down into the No. 6 stopes, and in a short time will be finished down to the No. 6 level, by which time we hope to get the surface work very nearly ready.

**DRAKEWALLS.**—Thomas Gregory, Nov. 20: The shaftmen are making fair progress in sinking the engine-shaft, and cutting plat at same time, below the 102 fm. level, the lode being worth 10½ per fathom. The north lode is producing about the usual tinstone, and bids fair to open a productive lode in depth. We have found an opening into the engine-shaft from the large open about 100 fms. below adit, and also a very small footway a few fathoms lower, but I have every reason to expect a more convenient connection a little deeper. There is no important change in any of our development works; all are looking fully as well as last reported, and we have some copper, blende, and lead ores from these works ready for dressing; but I do not propose taking down much ore except such as we are obliged to take in the way of development levels until the dressing machinery is ready for work. All our machinery at the several localities is working well, and we are continuing to reach the traditional 110. 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securing the same have retarded our progress in the past fortnight; but I hope we shall get on faster again in the future.

**POLBROOK.**—W. Vivian, Nov. 20: We are pushing on the work in the engine-shaft with all practicable speed. No change to notice in our tribute ground since last report.

**POLBROOK.**—W. H. Martin, Nov. 19: The lode in the 50 continues to open up satisfactorily; it contains large diamonds of tin, the largest I have seen in the mine. The 50 west is showing signs of a change, the lode is getting larger as we extend west of the soft patch of granite. The other points are looking much the same as reported for the general meeting.—Surface: The stamps are regularly working for a few days on poor stuff, to fill the holes in the new dressings.

**PRINCE OF WALES.**—S. Roberts, Nov. 18: We commenced taking down the lode in the 102 east to-day, which, so far as yet be seen, looks remarkably well, being 5 ft. wide, producing rocks of very rich tin and copper ore, worth 12½ per fathom for tin, a strong masterly-looking lode flowing freely in water. The lode in the 102 east to-day, which, so far as yet be seen, looks remarkably well, being 5 ft. wide, producing rocks of very rich tin and copper ore, worth 12½ per fathom for tin, a strong masterly-looking lode flowing freely in water.

**ROMAN GRAYLIES.**—Arthur Waters and Son, Nov. 20: The 125 north is worth 25 cwt. of lead ore per fathom; lode 3 ft. wide. The 125 south is worth 25 cwt. of lead ore per fathom, lode 6 ft. wide. The rise in the 110, south of Blockley's mine, is worth 2½ to 3 tons per fathom. The winze in the 95 going to meet and rise is worth 3½ to 4 tons per fathom. The 95 and south is worth 1 ton per fathom. The 80 south, the pioneer end in the mine, is worth 2½ to 3 tons per fathom. The winze in the 65, north of new shaft, is worth 2 tons per fathom. The winze in the 65, north of new shaft, is worth 2 tons per fathom.

**RUSSELL UNITED.**—John Bray, Nov. 20: Nothing new to report in either of the cross-courses since my last.

**SOUTH CONDUROW.**—W. R. H. Williams, H. King, Nov. 19: The lode in the 54 end, west of Marshall's shaft, is worth 6½ per fathom. We have set a rise in the back of this level to prove the lode above. The 65 end west carries good stones of copper. The lode in the 93 end west is of good average width, and the ground easy for working, but it yields no tin to value. The lode in the back of the 93, east of King's, is worth 12½ per fathom. The 83 end east carries stones of tin. The lode in the bottom of this level is worth 10½ per fathom. The 80 end, west of plantation shaft, carries stones of tin. The 70 end, east of King's, is worth 11 per fathom. We have communicated the rise in the back of this level with the level above. The 60 end east is worth 7½ per fathom. The lode in the back of this level is worth 10½ per fathom. The 50 end east is worth 10½ per fathom. The 40 end, east of engine-shaft, yields low quality tinstone. The lode in the back of this level is worth 12½ per fathom.

**SOUTH DEVON.**—Wm. Hooper, Nov. 20: In Martin's shaft, sinking below the 120, the lode is from 5 to 6 ft. wide, and without any particular change since last reported on; worth 2½ per fathom. The lode in the 120, west of the lode, is 3 ft. wide, containing capel, spar, and copper ore, worth 8½ per fathom. In No. 1, lode, in the back of this level, the lode is 3 ft. wide, with a value of 10½ per fathom. In No. 2, lode, in the back of this level, the lode is 4 ft. wide, worth 12½ per fathom.

**SOUTH DARREN.**—John Mitchell, Nov. 2: The following bargains were let on Saturday last for one month:—To drive the 133 east by four men, at 5½ per fathom. To drive the 133 west by four men, at 5½ per fathom. To sink a winze No. 2, east in the 130 west by four men, at 10½ per fathom; taken for 5 fms. To sink a winze No. 2, east in the 130 west by four men, at 10½ per fathom; taken for 5 fms. To sink a winze No. 2, east in the 130 west by four men, at 10½ per fathom; taken for 5 fms. To sink a winze No. 2, east in the 130 west by four men, at 10½ per fathom; taken for 5 fms.

**SOUTH PENSTRUTHAL.**—T. Davey, Nov. 20: In the 128, driving west of Walton's engine-shaft, there is no change to notice, as the junction of the north and south parts has not yet been met with, but judging from the water oozing through the south or hanging-wall I think we shall speedily have it. The end is producing a little black, gray, and yellow copper ore, with fluorapatite, and manganite. The men are making good progress in driving. The end carried 15 ft. in the 170, west of flat-road shaft, the ground is easier than when last reported, and letting out water free; the end is carried 6 ft. wide, composed of quartz, capels, and flookan on the north wall, with spots of yellow ore throughout, making good progress in driving. All machinery working well.

**SOUTH TOLCARNE.**—J. Jennings, Nov. 13: On our setting-day, Nov. 1, was set, in addition to other bargains, the 90, west of shaft, on Fraser's lode, and also a cross-cut south in this level to intersect the Flat lode. The lode in the 80 and west is 3 ft. wide, spotted with gray and yellow copper ore—a very promising lode, and we are looking forward to a good improvement.—Flat lode: The 70, west of shaft, is very much improved in appearance since the drifter or flookan lode has passed through it; it still produces good tinstone. I shall open on the flookan part as soon as convenient. The 70, east of shaft, here is a fine masterly lode, contains veins and faces of tin, with prismatic joints, altogether a most promising lode for an early improvement.—Taylor's lode: In the 24, west of cross-cut, the lode is about 3 ft. wide, producing 3 tons of copper ore per fathom and some tin; this lode seems just now to be best in the bottom of the level.—Gossan lode: No particular change in the 46 since the general meeting. These shafts have been engaged in squaring down the shaft from the 36 to the 46, putting in skip-road, and other necessary work, which is now completed and working satisfactory. The 46 will now be pushed on rapidly. The east end is letting out a quantity of water, and the lode is getting more settled. Our tribute pitches are looking fairly well.

**STANDARD LEAD.**—W. H. Borlase, Nov. 20: The lode in the 45 west is as for some time past, producing good blende, permeated with sulphur, mundle, and lead, and letting out a quantity of water; but there is no day every appearance of a general change taking place shortly in the composition of the lode, as the layers of quartz from the hanging are becoming larger and stronger. The lode in the 20, in the back of the 23 fm. level, south of new shaft, is producing 30 cwt. of lead and blende per fathom. The stripping down of the new shaft is proceeding as fast as the nature of the work will admit, and I hope to complete the section from the 23 to the 33 fm. level next week. The new wheel will be completed to-morrow, and the machinery attached thereto as early as possible. We sampled to-day 25 tons of lead ore, and purpose sampling 40 tons to-morrow.

**TERRATH LEMARNE.**—W. Skewis, Nov. 13: The 10 is being driven by four men, at 5½ per fathom; the lode is about the same size as it has been for some time past, yielding good work for arsenical mundle. The lode in the back of the adit level is being stopped by six men, and turning out a fair quantity of arsenical mundle, with some tin. The calculating of the white is being continued every day, and we shall soon be in a position to say what the real price of the tin and arsenic is. All the work on the Guiley lode is suspended for the while, the price of tin being so low.

**TREGOOTH AND OLD POLGOOTH CONSOLS.**—T. Parkyn, Nov. 20: Since my last report we have cut into the Flat lode; this point was reached on Nov. 17, and I am pleased to be able to report that the work sent out is splendidly rich in tin. As the men are engaged cutting through and opening up the lode, I shall be in a position to report more fully on the subject in my next. The tribute department generally is improving, the stamps are looking better, and yielding superior work for tin. We sold last week 3 tons 12 cwt. 0 gr. of tin; produce, 13½, at 44½. 74. 6d. per ton, the price being based on that of refined tin.—Muley's lode: In the 92, south of the lode, is 5 ft. wide, yielding 30 cwt. of lead and blende per fathom. We are down 10 ft. below the 15. The machinery, including pumping-rods, &c., is working very satisfactorily. This work, it will be agreed, has been done in a remarkably short space of time. I would add that a full pair of men are employed in sinking the shaft day and night, that every effort will be made to reach the 25 at the earliest moment.

**TAUNTON UNITED.**—Wm. Vivian, Nov. 20: We have commenced to build the engine-house. No change to notice in the mine. A full, or rather detailed report, will be forthcoming next week at the general meeting.

**WEST CARADON.**—N. Richards, Nov. 19: Gillin's lode, in the 23, is got down again, yielding saving work. We intend shortly to rise and sink a little back, where we had the ore to prove the lode. The stamps in the back of the pit, on this lode, will yield 3 tons of copper ore per fathom. A lode in the bottom of this level will yield 1 ton of ore per fathom.

**WEST CREBOR.**—John Andrews, Nov. 19: There is little or change in either of the cross-courses since reported on a week ago.

**WEST GODOLE.**—T. Hodge, F. Hodge, Nov. 18: After a careful survey of the workings below and above ground, we beg to hand you the following report thereon:—Caunter lode: In the 92, south of the lode is 5 ft. wide, yielding 30 cwt. of lead and blende per fathom. We are down 10 ft. below the 15. The machinery, including pumping-rods, &c., is working very satisfactorily. This work, it will be agreed, has been done in a remarkably short space of time. I would add that a full pair of men are employed in sinking the shaft day and night, that every effort will be made to reach the 25 at the earliest moment.

**WEST KITT.**—W. Vivian, Nov. 20: In No. 3 rise in the back of the 20, east of cross-cut, the lode continues to improve, now worth over 100½ per fathom. No change to notice in the other points of operations since my last report.

**WEST POLBROOK.**—Wm. Vivian, Nov. 20: We are making good progress in sinking the engine-shaft. No change to notice in the 40 west since last report.

**WEST WHEAL FRYOR.**—W. Z. White, Nov. 20: The driving of the 60 being an important object in reaching the tin ground passed through in the 49, we are pushing it on as fast as possible, and the men are doing very fair labour. This week we commenced to sink a winze in the bottom of the 48 for the purpose of opening up the tin ground discovered. The lode in the winze is producing some good work for tin. We have now passed through a fair lode of tin in driving to surface. In length, and the tinstuff we have broken we are now drawing to surface.

**WHEAL AGAR.**—W. Trevena, Nov. 18: Setting Report: The 215 fm lode is being driven east of engine-shaft, by six men, at 5½ per fathom, where the lode is worth for tin 12½ per fathom. A lode in the bottom behind this lode is worth for tin 20½ per fathom, and stopping by 12 men at 6s. 6d. per ton of stuff. The 202, east of No. 2 winze, is worth for tin 25½ per fathom, and stopping by nine men, at 5s. 6d. per ton. No. 3, lode, west of No. 3 winze, is worth for tin 25½ per fathom, and stopping by nine men, at 6s. 6d. per ton of stuff. The 215 is driving east of cross-course on the south lode, by six men, at

14½ per fathom, and worth for tin 15½ per fathom. The rise above this level on the cross-course is rising, by four men, at 6½ per fathom. The 215 cross-cut is being driven north towards the new shaft, by nine men and machine, at 10½ per fathom. The 205 is driving east of shaft, by six men, at 9½ per fm., where the lode is worth for tin 10½ per fm. A lode behind this end, east of cross-course, is working, by 12 men, and 4s. 9d. per ton, and worth for tin 20½ per fathom. The 205, east of shaft, is worth for tin 12½ per fathom, and stopping, by nine men, at 8s. per ton. The 205 is driving west of winze, by nine men, at 12½ per fathom, and worth for tin 15½ per fathom. A lode working west of this winze is worth for tin 25½ per fathom, and stopping, by nine men, at 5s. 9d. per ton. The lode, east of winze, is worth for tin 20½ per fathom, and stopping, by six men, at 5s. 6d. per ton. The 205 cross-cut is driving, by nine men, at 10½ per fathom, which is cutting through the lode, and worth for tin 10½ per fathom. The 195 is being driven east of shaft, by nine men, at 8s. 10s., where the lode has a very fine appearance, and worth for tin 30½ per fathom. A lode behind this end is working, by nine men, at 5s. per ton, and lode worth for tin 25½ per fathom. The improvement in this end is very important, and is likely to lead to shallower levels, which will greatly enhance the value of the mine. The 195 rise against the new shaft is rising, by nine men and machine, at 13s. 10s. per fathom, and very fair progress being made. The new shaft is being cut down below the 140, by 12 men, a contract of 1000, to complete it to the 150 fm. level. By the unfortunate accident on Friday last, whereby one side of the main beam of our pumping engine broke, we were unable to set in our bottom level. Our engineers are busily employed in repairing the breakage, and hope to be again working on Thursday next.

**WHEAL GREBOR.**—Henry Phillips, Nov. 18: The lode in the 156 driving west of new shaft is over 2 ft. wide, composed of friable spar, intermixed with arsenical mundle; the killas is similar to the killas driven through in the 144 west. We have met with water in the winze sinking below the 144, west of new shaft, which has compelled us to suspend it for the present; the winze is down about 5 fms. below the 144 on the south part of the lode. The men are now engaged in cutting through the lode to the north wall. We have cut in about 5 ft., and find the lode as far as seen to be quite as good as in the level above; value, winze included, 6 tons of copper ore and 2 tons of mundle per fathom. The lode in the 144 driving west of new shaft will yield 3 tons of copper ore and 3 tons of mundle per fathom. Our stopping ground will yield in the aggregate 31 tons of copper ore and 8 tons of mundle per fathom. The winze sinking below the 48 east of new shaft will yield 2 tons of copper ore and 1 ton of mundle per fathom. All other points are without change.

**WHEAL GRENVILLE.**—T. Hodge, Nov. 17: The 205 east end is worth 9½ per fathom, and likely to improve. The 190 east end is worth 13½ per fathom. The 175 east end is worth 7½ per fathom. The 165 east end is poor; we are expecting an improvement here soon. The 150 east end is looking more promising, producing occasional good stones of tin. The 140 west end is worth 9½ per fathom. The 130 west end is worth 12½ per fathom. Our stopes on the whole are not looking so well, but the tribute pitches on the whole are yielding fairly well.

**WHEAL LUSKY.**—Wm. Skewis, Nov. 18: In the adit cross-cut driving east we have intersected two lodes. No. 1 is 4 ft. wide, composed of quartz, capel, mundle, and some copper ore. No. 2 lode is from 5 to 8 ft. wide, of a similar composition as the No. 1. There is about 4 ft. of killas between the two lodes. The end is now being driven to intersect the elvan course, and after that it is intended to be continued to the No. 3 lode, which is about from 5 to 6 fms. south of the elvan course. We consider this is important, in order to ascertain the bearing and underlay of the different lodes in connection with the elvan course. The lodes at these points are much larger, and have a finer appearance altogether than they had when we saw them in the granite. We are, therefore, of opinion that there is a fine prospect of a good mine being opened up in the eastern ground.

**YEOLEND CONSOLS.**—Joel Manley, Nov. 17: No. 2 adit was driven last month 3 fms. 2 ft., and is again set, to six men, at 4½ per fathom, the takers to turn their stuff to surface. The part of the lode carried, 5 ft. wide, has a magnificent appearance, its component parts being gossan, quartz, blue posch, and prismatic disseminated with tin throughout, which about 2 ft. towards the hanging wall will produce good stamping-work. The lode is well-defined, with a good strong hanging-wall, and I should say from present appearance, we may expect an early improvement at this end. We sold a small parcel of tin the week before last, which was of the best quality. All other works going on at the mine as usual.

**GOLD AND SILVER.**—Messrs. PIXLEY and ABELL (Nov. 13) write:—The demand for gold for abroad has, in consequence of the rise in the Bank rate of discount, decidedly slackened, the amounts of bars from the Continent have only been placed in the open market at a very slight increase on the Bank's buying price, whilst the imports from Paris have quite ceased, the Bank of France charging a premium of 4 per mille on gold required. The only withdrawals since our last have been 95,000 sovereigns from the Bank for Lisbon, Monte Video, and Egypt. The arrivals comprise 25,000l. from New Zealand, 11,000l. from River Plate, and about 35,000l. chiefly from Holland. The Pagus has taken 70,000l. to Lisbon and the River Plate; the Tasmanian has taken 90,000l. in coin to Egypt. The silver market has daily declined since our last circular of Nov. 6. We then quoted 50½d. per ounce standard, but under the influence of considerably lower exchanges from India, and the consequent decline in the rates at which the India Council drafts and transfers have lately been sold, the price of bars has fallen to-day to 49½d., at which the amount by the Neva has been placed, an exceptional operation. The Don has brought from the West Indies 22,000l.; the Neva has brought from the River Plate 68,900l.; the Germanic has brought from New York 40,000l.; total, 128,900l. The Tasmanian takes 25,000l. to the East. In Mexican dollars, pending the arrival of the French West India steamer at St. Nazaire, there is no business doing, and we are unable to give any quotation. The quotations for bullion are—Bar gold, fine, 77s. 9d. per ounce standard; bar gold containing 20 dwts. silver, 77s. 10½d. per ounce standard; bar silver, fine, 50½d. per ounce standard; bar silver, containing 5 grs. gold, 50½d. per ounce standard; cake silver, 53½d. per ounce; Mexican dollars, no price; quicksilver, 5s. 10s. to 5s. 17s. 6d.; discount 3 per cent.

**GOLD AND SILVER.**—Messrs. PIXLEY and ABELL (Nov. 20) write:—Only a few small amounts of gold have been taken from the open market for the United States, the general demand having ceased to such a degree that 179,000l. in bars and coins, received from the Continent, have been sent into the Bank. The price of silver declined to 49½d. per ounce after the issue of our last Circular, but firmer exchanges have since been received from India, and the India Council drafts and transfers went at an improvement in rate yesterday; silver also rose to 49½d. to 49½d., the market being firm and bare of supplies. An exceptional order has caused a rapid rise to 50½d., and we quote at this price of this day. We have received 49,000l. from Chile and 49,360l. from New York; total, 98,360l. The Medway has taken 17,475l. to the West Indies, and the Peninsular and Oriental steamers 105,400l. to India. Mexican Dollars: The French steamer has not yet arrived, having met with an accident to her engines; we are, therefore without the dollars by her, and cannot give any quotations. The quotations for bullion are—Bar gold, fine, 77s. 9d. per ounce standard; bar gold, containing 20 dwts. of silver, 77s. 10½d. per ounce standard; bar silver, fine, 50½d. per ounce standard; bar silver, containing 5 grs. gold, 50½d. per ounce standard; cake silver, 53½d. per ounce; Mexican dollars, no price; quicksilver, 5s. 10s. to 5s. 17s. 6d.; discount 3 per cent.

#### GREAT WHEAL POLGOOTH COMPANY.

On Nov. 15, in the Chancery Division of the High Court of Justice, Vice-Chancellor Sir James Bacon resumed the hearing of the summons taken out by the official liquidator in re the Great Wheal Polgooth and the Companies Acts, and adjourned into Court from Chambers. Mr. Chadwyck Healy and Mr. Percy F. Wheeler again appeared for the official liquidator, Mr. Hatfield Clarke for the respondent Fortescue, and Mr. Mark Knowles for the respondents Wilde and Sir W. Crosbie. The particulars were reported in last week's Mining Journal. Mr. Healy, continuing his history of the company, said that the contract stated that the vendor was possessed of a lease for the term of 21 years of the Great Wheal Polgooth Mine, and that the company had been formed with a capital of 100,000l. in 100,000 1l. shares, and the contract entered into was for the sale and purchase of the unexpired lease of the premises in Cornwall, subject to the rent and royalty reserved by the lease, and "the steam-engines, cranes, pumps, and all other plant, machinery, tools, chattels, and effects, in and about the said premises." He wished to draw special attention to this last sentence, because there never was on the premises plant of a greater value than 500l., and there never were any steam-engines, cranes, pumps, or anything of the kind. There were soon very considerable applications for shares; 2500 shares were applied for by the general public, and there was also an application for 40,000 shares by one Morgan, and one for 4000l. by "Captain Fortescue," a person who never existed. He might inform the Court that Morgan also never existed, Major Fortescue, the respondent, Mr. Wilde, and Sir W. Crosbie, were all asked by Stephenson to become directors of the company. General Nuttal, who was one of the original directors, but who retired very soon, was asked by some broker in the City. They all agreed to become directors, but complained of the issue of the prospectus in their name prior to their joining the company. Reynolds was present at nearly all the meetings of the directors, and was constantly referred to by them when they were in any doubt or difficulty. Major Fortescue began to be dissatisfied on the first day. He complained of the way in which the business was conducted. At the second meeting of the directors, held on March 26, it was resolved that Stephenson should proceed to Cornwall as soon as possible to commence operations. They also adopted the agreement by which it was agreed to pay 65,000l. for property which was worth absolutely nothing. After some further remarks from the learned counsel.

Vice-Chancellor Bacon said: As far as you have gone it is a mere indictment for conspiracy. It is an Old Bailey case. When you tell me that it has been before the late Master of the Rolls, and that he has made strong observations, it brings to my mind what I have thought from the beginning—that it is a case much more suitable for the Old Bailey—that is to say, if your statement in opening it is true.

Mr. Healy hoped to show his lordship that his statement was true. On May 25 a letter from Major Fortescue was read at the meeting of directors, stating that unless certain resolutions were agreed to he should apply for an injunction to restrain the company from paying further money to the vendor, and to wind-up the company. These resolutions were to the effect that the Articles of Association should be cancelled, that Major Fortescue should be authorised to inspect the property at once, accompanied by an engineer of experience, to be chosen by himself, that a cheque for the 40,000 shares applied for by "Morgan" shall be handed in before 4 o'clock on the following Wednesday, and that the vendor should enter into a bond to guarantee the directors against liability for any action taken up to that date. It was, however, decided at the meeting, Major Fortescue himself being present, that the determination expressed in the letter should be postponed until after the statutory meeting.

On July 7 it was resolved to request the presence of Reynolds, Anderson, and Mr. Turner, at a meeting, and to consider what steps should be taken for the protection of the company. On July 11 Major Fortescue resigned. On July 12 Mr. Turner attended before the directors and read affidavits procured by him in Cornwall in support of statements in the prospectus. On Aug. 3 Vice-Chancellor Bacon ordered the company to be wound-up. The Court, he continued ought to bear in mind the fact that not one of the directors, with the exception of Major Fortescue, ever ventured a penny of their own in the concern.

At this point the further hearing of the case was again adjourned.

#### WATSON BROTHERS MINING CIRCULAR.

WATSON BROTHERS,  
MINEOWNERS, STOCK AND SHARE DEALERS, &c  
1, ST MICHAEL'S ALLEY CORNHILL, LONDON

In the year 1843, when mining was almost unknown to the general public attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with Statistics of the Mining Interest, published annually in the Mining Journal for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring the success in the aggregate," and Messrs. WATSON BROTHERS have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and share-dealing than there is at present; and from the lengthened experience of Messrs. WATSON BROTHERS they are enabled to offer, thus publicly, their best services and advice to all connected with mines and mining.

Messrs. WATSON BROTHERS are daily asked their opinion of particular mines, as well as to recommend mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

The great extension of mining business, the difficulty so often complained of by country shareholders in getting accurate and indisinterested information as to the state of Cornish and Foreign Mines, and of the financial and real position of mining companies generally, have induced Messrs. WATSON BROTHERS to make their Circular now published in the Mining Journal more extensively known, and to state—

That they issue daily to clients and others who apply for it a Price List (as supplied to most of the London and country papers), giving the closing prices of mining shares up to Four o'clock.

They also buy and sell shares for immediate cash, for the usual fortnightly settlement in all Mines dealt in on the Mining and Stock Exchanges, at the close market prices of the day, free of all charge for commission. They deal also, on the same terms, in the Public Funds, Railways, Telegraphs, and all other Securities dealt in on the Stock Exchange.

Having agents in all the mining districts, they are constantly getting mines inspected for their own guidance, and will also obtain special reports of any particular mine for their clients, for the inspecting agent's fee of 42s.

Messrs. WATSON BROTHERS take this opportunity of stating that on July 1 they took into partnership Mr. H. J. DEAN, who has been for a number of years associated with the firm, and Mr. W. H. H. WATSON, who has had some years experience of practical mining and engineering in Cornwall, and is the son of the senior partner. The firm will still be called that of "Watson Brothers."

The number of weekly communications received from almost every part of the world in regard to remarks in this Circular indicate so plainly how much they are read (and, we trust, appreciated) that they will be continued by the same writer.

Indeed, while new blood is introduced to attend to the more laborious and mechanical details of the business, the old will have more time to devote to their different departments.

With reference to our remarks last week on the causes for the present low price of Bratsberg shares a correspondent points out that we omitted to notice the great fall in the price of copper, Chili bars having fallen in the 12 months from about 60s. to 52s.—a lower quotation, we believe, than ever known before; while shares of the long established and largely profitable copper companies have also gone down very much; for instance, in the last year Mason and Barry have fallen about 40 per cent.; Rio Tinto about 35 per cent.; Panulicillo about 40 per cent.; Copiapo about 60 per cent.; Tharsis about 13 per cent. This great depreciation in the value of copper has of course had a material effect also on the profits of Bratsberg, though the quantity returned for the past year will exceed that of the previous one; "and the managers hope to continue the shipments during the winter, the company having now its own steamers."

The action in regard to the Cost-book—that of West Crebor v. Colmer, to which we have referred once or twice—has gone through another phase. It came on before the Judges of the Queen's Bench this week, the defendant moving to set aside the judgment entered for the plaintiff on a former occasion. Their lordships, after reading the correspondence between the parties, dismissed the motion with costs. We have nothing to do with the management of West Crebor, and only refer to the case as illustrating an important phase in the Cost-book.

We are not going to enter into a defence of the Cost-book, it needs none to those who know its *modus operandi* when properly carried out and conducted. Of course, it is often abused like other things, and too often judged by its abuses alone. All the mines paying dividends or making profits at the present time, such as Dolcoath, East Pool, Wheal Agar, West Kitty, Wheal Crebor are on the Cost-book System, the main feature of which is that all go in alike and share alike; and there is no opportunity of weighing mines with the enormous sums for promotion money that many Limited companies have to bear. When there are finance committees to audit accounts every month, and regular meetings of shareholders are held everyone can estimate his liability and relinquish his shares in a bad concern whenever he pleases. If a holder, however, transfers his shares to a man of straw to avoid his liability and it comes to a wind up in the Stannaries Court the transferee is made liable, and justly so. At all periodical meetings a list of shareholders is laid on the table, and a man can always see who his partners are.

Let anyone read the proceedings in the law courts of late in regard to the Great Wheal Polgooth Company (Limited), and say if he heard anything of any company more shameful and discreditable. Yet we do not look upon that company as a specimen of Limited Liability companies, but as one of its grossest abuses—worse than anything that ever occurred, or could occur, in the worst of Cost-books. Yet, as we have said before, the abuses that may occur occasionally in a few Cost-book mines are always brought prominently forward by those who prefer Limited companies, whilst its many excellent provisions are entirely ignored.

The points in operation at East Blue Hills are worth 32½ per fm. in the aggregate. The lode in the shaft is 6 ft. wide, averaging 42 lbs. of tin to the ton of stuff.

Prince of Wales is looking better both in the 102 east and 90 west. The lode in the 102 east is now 8 ft. wide, producing rocks of very rich tin and copper ore.

One hundred and thirty tons of average stuff have now been tested at Oscar, and the result, we understand, is above ½ oz. of gold to the ton. This result is considered by the agents as satisfactory, and Capt. Daw is on his way to England.

TRAMWAYS.—The closing prices of this evening, as quoted by Mr Wm. Abbott, of Tokenhouse-yard, are given in tabular form in the last page of the Journal.



## TO THE METAL TRADE.

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The Company receive for storage at their Warrant Yard, in the Millwall Docks,  
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security to enable the holder to obtain advances on the Lead stored.  
The Company do NOT make advances on Lead deposited with them.  
Particulars may be obtained at the Offices of the Company.  
CHAS. F. SMITH, Secretary.  
6, Great George-street, Westminster, S.W.

## The Mining Market: Prices of Metals, Ores, &amp;c.

METAL MARKET—LONDON, Nov. 21, 1884.

IRON.	£ s. d.	£ s. d.	TIN.	£ s. d.	£ s. d.
Fig. 6ms, f.o.b., Clyde...	2 3 6 1/2	—	English, ingot, f.o.b. ...	75 3 0	75 0 0
Scotch, all No. 1 ...	2 4 3	—	do refined ...	80 0 0	81 0 0
Bars Welsh, f.o.b. Wales ...	4 17 6	—	Australian ...	75 0 0	—
do in London ...	5 7 6	—	do refined ...	80 0 0	81 0 0
do in Tyne or Tees ...	5 0 0	—	do refined ...	80 0 0	81 0 0
do Swedish, London ...	5 15 0	9 15 0	do refined ...	80 0 0	81 0 0
Rails, Welsh, at works ...	4 17 6	—	do refined ...	80 0 0	81 0 0
Sheets, Staff., in London ...	5 7 10 0	—	do refined ...	80 0 0	81 0 0
Plates, ship, in London ...	7 10 0	8 0 0	do refined ...	80 0 0	81 0 0
Hoops, Staff., in London ...	6 7 6	—	do refined ...	80 0 0	81 0 0
Ball rods, Staff., in Lon. ...	5 0 0	—	do refined ...	80 0 0	81 0 0
Swedish, ...	5 15 0	9 15 0	do refined ...	80 0 0	81 0 0
English spring ...	12 0 15 0	0 0	do refined ...	80 0 0	81 0 0
cast ...	30 0 45 0	0 0	do refined ...	80 0 0	81 0 0
Swedish, keg ...	13 0 14 0	0 0	do refined ...	80 0 0	81 0 0
do fag. ham. ...	13 0 14 0	0 0	do refined ...	80 0 0	81 0 0
Rails at works ...	4 17 6	5 0 0	do refined ...	80 0 0	81 0 0
Light, at works ...	5 17 6	5 0 0	do refined ...	80 0 0	81 0 0
LEAD.			do refined ...	80 0 0	81 0 0
English pig, common ...	10 17 6	11 0 0	do refined ...	80 0 0	81 0 0
do L.B. ...	11 0 11 2 6	—	do refined ...	80 0 0	81 0 0
do W.B. ...	11 2 6 11 5 0	—	do refined ...	80 0 0	81 0 0
do sheet and bar ...	11 12 6 11 15 0	—	do refined ...	80 0 0	81 0 0
do pipe ...	12 5 3	—	do refined ...	80 0 0	81 0 0
do red ...	13 5 14 0	0 0	do refined ...	80 0 0	81 0 0
do white ...	14 10 18 10	0 0	do refined ...	80 0 0	81 0 0
do patent shot ...	14 0 0	—	do refined ...	80 0 0	81 0 0
Spanish ...	12 12 6	—	do refined ...	80 0 0	81 0 0
NICKEL.			do refined ...	80 0 0	81 0 0
Metal per cwt. ...	—	—	do refined ...	80 0 0	81 0 0
Ore 10 percent. per ton. ...	—	—	do refined ...	80 0 0	81 0 0
SPELTER.			do refined ...	80 0 0	81 0 0
Billean ordinary brands ...	5 0 14 7 6	—	do refined ...	80 0 0	81 0 0
do special brands ...	14 10 0 14 12 6	—	do refined ...	80 0 0	81 0 0
English Swansea ...	15 5 0	—	do refined ...	80 0 0	81 0 0
Sheet zinc ...	17 10 17 15 0	—	do refined ...	80 0 0	81 0 0

\* At the works, 1s. to 1s. 6d. per box less for ordinary; 10s. per ton less for  
Canada; 1X 5s. per box more than 10 quoted above, and add 6s. for each X.  
Terne plates 2s. per box below tin-plates of similar brands.

REMARKS.—There is no important change to record in our markets, but, on the whole, the tone has been stronger, and at times slightly higher rates have been realised, but towards the close the markets are weaker again. This better feeling, slight as it was, is very satisfactory considering the extra adverse influences which have arisen since last writing. In the first place, the announcement of a heavy commercial failure at the close of last week produced an unhealthy influence over our markets, for it was uncertain how far this suspension of payment might affect others in the trade, and whether it would lead to more financial difficulties. Prices for metals, however, being exceptionally cheap, and supported by the regular business that was doing, the effect produced was not very serious, and besides a mere passing increased uneasiness of feeling for a day or two, the effects of these difficulties have been scarcely noticeable. The next feature to be viewed of an unfavourable character, and which in these critical times may bear some important effect upon the trade of the country, has been the determination of the Government to increase the income tax. After a period, when in the commercial world losses have been so frequent, profits small, and most of the trade is more or less impoverished, increased taxation is anything but desirable, and may even tend to delay any recovery from the already too lengthy and protracted depression. At the present time the trade requires relief, not oppression, retrenchment, and not increase of expenditure, so that this excess of taxation comes at a time when the trade perhaps is least able to stand against it. However, whilst these are matters which produce an unhealthy effect, yet at the same time the present state of the metal trade is tolerably sound. Business is conducted in a careful manner, and is not characterised by rash and undue speculation, so that the markets are better able to avert any little adverse feature that may arise.

There is at the present time, leaving the market fluctuations out of the question, some disposition shown not only to support the markets, but even to demand slightly higher rates, in some cases from reports of more limited supplies, and in others from the announcement of fairly good deliveries. Thus we find that for the greater part of the week iron has been rather dearer so far as Scotch pits are concerned, copper somewhat steadier, tin slightly higher, quicksilver advancing, and lead stronger. We see then that the disposition towards improvement is fairly general, and not confined merely to one metal, a feature which in itself is promising, although the recovery at present is not very pronounced. Of course we are just about to enter the winter quarter of the year, a season which, as a rule, is generally noted for quietude in trade, and which makes many believe that there will be no real and general revival this year. At the same time the fact must not be overlooked that there has not been the usual autumn trade down this year, and in consequence there is a deficiency to make up, which when taken in connection with the good harvests reaped here, in America, and elsewhere would indicate an extensive business in the future. We have also to remember that, instead of prices advancing this autumn, as is usual, they have for the most part receded, and, therefore, holders will be more reluctant to accept reduced rates in the coming months than what they usually are, irrespective of the demand that may exist. Partly to these causes, and partly to favourable feature, which affect the separate markets, we may attribute the hardening tendency of prices during a few days of the week, and we have still to wait and see as time progresses whether the improvement will not be further developed.

COPPER.—This market having opened with a steady tone at the commencement of the week, afterwards became firm, and then easier, the final result being to leave prices somewhat lower than what they were a week ago. The Chill charters for the first half of the present month were announced last Monday as 1400 tons, but this did not produce much effect upon the market, because the two previous charters were particularly heavy, and therefore slightly under the average quantity was rather anticipated. The price telegraphed from Valparaiso was \$11.4s. c.i.f. Liverpool, and, while we can scarcely expect prices to recede to that figure yet awhile, yet at the same time the prospect is not very encouraging, and some holders are decidedly weak in their quotations. The demand for manufactured is not very brisk, and prices are somewhat easy, but a moderate business has been done at the reduced rates.

Most of the smelters are still fairly off for work. They hold enough orders to keep their works in operation for the time being, but they find that present contracts will not give them employment much longer; and, therefore, they are indisposed to book orders at reduced rates chiefly for forward delivery. It is not thought likely that deliveries will be very large either this or next month, which rather tends to damp the tone, and encourage some holders to push sales as much as possible; but, at the same time, there is not much cause for anxiety on

this score, for the low price will most likely continue to form a great stimulus to the ordinary demand, irrespective of its effect upon buying for speculation; and the lower prices descend the greater will the demand be, both for consumption and also to meet the export requirements of the trade.

IRON.—Steadiness has been the principal characteristic of this market, but in most branches of the trade there is still considerable quietude. There is no new feature of any importance to warrant anticipations of a revival in the demand, the only feature which offers encouragement, and with which the trade is disposed to view as an encouraging sign, is the stimulus which may be given to the demand through a possible increase in shipbuilding to meet the wants of our Navy. This would certainly give an impetus to the trade, enlarge the demand, and be a great relief to the market at the present time. Already it is favourable to note that the shipbuilding industries continue to slightly improve, and more hands are again taken on; and, in fact, taking the iron industries as a whole, although low wages and short time regulations are still in force, and not likely to be discontinued for some time, yet, nevertheless, there is more employment and, comparatively speaking, greater activity.

In the Scotch warrant market there is decidedly less irregularity than there was, and prices, on the whole, have been fairly steady. There seems a disposition now to sustain the advance, which may partly arise from an expectation that there are more "bear" sales to cover in, and also any reduced prices would be so extremely unprofitable that every effort may be put forward to sustain the little advance of the past few weeks. It wanted something to start the upward movement, that, after long delay, was forthcoming, and a rise was effected in prices. The advance was but small, about 2s. per ton only, and prices being still exceptionally cheap, holders may not experience much difficulty in supporting their market. At any rate, prices are not likely to recede so rapidly as they advanced; but if the demand should continue limited, confined to buyers' most urgent requirements, and the feeling of uncertainty continues to exist, then quotations may once again begin to crumble away as heretofore.

The Glasgow warrant market opened on Monday at 43s. 4½d., but the price quickly receded to 42s. 10½d., improving again to 43s.; while on Tuesday the opening price was 41s. 10½d., and business was done up to 43s. 1d., but once more receded to 43s. On Wednesday the market was very firm, and a fair business was done between 43s. 4d. and 43s. 7½d., whilst yesterday, although 41s. was once touched, the chief business was done between 43s. 10½d. and 43s. 7½d., leaving off at the lower figure, and closing this afternoon at 43s. 7½d. cash. The shipments, last week were 6578 tons, against 12,197 tons for the same week of last year, being a decrease of 5429 tons, and which makes the total shipments for the whole of this year 485,953 tons, against 578,470 tons for the same time of last year, and 571,324 tons for the similar period of 1882. There is one furnace less in blast, the total now being 95, while the public stock has been further reduced by 320 tons, and now amounts to 579,551 tons, against 580,111 tons last week. The imports of Middlesbrough pig-iron into Grangemouth last week were 6997 tons, against 5449 tons for the corresponding week of last year, being an increase of 1548 tons, and which leaves a total decrease for the whole of this year compared with last of 5855 tons.

The Middlesbrough market has been steady, prices being fairly strong, although not much business has been transacted. The shipments last week were very heavy, being more than 28,000 tons, and which makes the total for the month 50,453 tons. The price for No. 1 is 35s. 3d. for prompt delivery and 3d. more for forward. There is some scarcity of forge iron, and in consequence an improvement in prices, the present quotation being 34s. 3d. to 34s. 6d. Warrants are being offered at 35s. 4d., and the public stock shows a reduction for the week of 290 tons, making the present stock 53,314 tons. For manufactured the demand keeps limited, and there is no particular change to record. The price of common bars is 5½; of angles, 4½; 15s.; ship-plates are quoted at 5½, and puddled bars at 6s. per ton. At Wolverhampton a fair number of orders have been received, but they are chiefly for small quantities. Prices, however, are unimpaired, merchant sheets being quoted at 48½ for singles; tank-plates, 7½ and upwards; boiler-plates are quoted at 48½ to 49½ per ton, hoops at 62½, and pigs are dull of sale at 45s. to 50s. for part-mills, and 37s. 6d. to 42s. for common. At Birmingham there is no change to report, either in the demand or price, and the market presents a very inanimate appearance. There is a moderate demand for sheets, particularly amongst glaziers, and sellers will not accept further reduced rates. There is very little doing in marked bars, but a fair number of transactions in common bars. Sellers of pigs have booked tolerably well forward.

TIN.—This market has been fairly steady, and a fair business has been transacted. At the early part of the week the tendency was towards higher rates, but yesterday there was a slight turn in a downward direction, although no alteration was made in the official quotation. The deliveries for the first half of this month were very fair, and to this cause may be attributed the hardening tendency of prices at the commencement of the week, combined also with advices of somewhat limited supplies. The most satisfactory feature in the market at the present time is undoubtedly the continuance of heavy deliveries. Last month they were exceptionally large, and according to the latest advices they are this month being continued upon an extensive scale. This is not only a satisfactory feature in showing the transacting of a large regular business, but it likewise indicates more remunerative prices in the future, particularly as stocks here are small.

There is evidently more confidence in the stability of the market than there was, as is proved by the increased price quoted for forward prompt compared with cash. Prices may be made easy for awhile in order to induce weak holders to effect sales, but with the continuance of a large regular business it is not likely that prices will be kept down much longer. The market is merely depressed from the ill effects caused by other metals and other branches of trade, but as regards this market itself it must be acknowledged to be in a very satisfactory position. Prices are low, and thus are stimulating the demand; stocks here are light, easily managed, and constantly being reduced, whilst deliveries are exceptionally heavy, and supplies from all sources extremely moderate.

LEAD opened firm this week at 10½. 15s. for Spanish, but afterwards receded somewhat, and sellers have been offering for December and January deliveries at 10½. 12s. 6d. English pigs are quoted at 10½. 7s. 6d. to 11½. per ton.

SPELTER is quiet, with ordinaries at 14½. 5s. to 14½. 7s. 6d., and special brands at 14½. 10s. to 14½. 12s. 6d. per ton.

STEEL.—The market is brisker, particularly in the North, for rails.

TIN-PLATES.—A moderate business is doing at unchanged prices. QUICKSILVER.—The week has been characterised by considerable excitement, and a very large business at rapidly advancing prices, the closing value being 6½. 15s., at which the importers would only sell quite small quantities. There have been good shipping orders in the market, whilst speculators have operated with great confidence and freedom.

There has been rather more activity in the MINING SHARE MARKET this week for one or two of the principal tin mines, in anticipation of a rise in tin, and Dolcoath has advanced in price; but on the whole the market has been dull and business very restricted. It is generally in dull times that holders press shares for sale, and if there are no buyers at the same time quotations are put down, while others remain at mere nominal prices.

TIN is firm; but, contrary to expectation, the standard for ores has not yet been advanced in Cornwall. In shares a moderate business has been transacted. Carn Breas are quoted 3½ to 3½. Cook's Kitchen, 10 to 11; the lode in the shaft has improved; it is now a little more than 360 fms. deep, and winzes having been put through the ground between the 345 and 353 fm. levels, more tin will be returned in future. Botallack, 3½ to 4; at the meeting in Cornwall the accounts showed a loss on the quarter of 545½, and a balance against the mine of 4419½. A call of 1½. per share (800½) was made. The ores sold realised 2758½.

Dolcoath advanced to 68, leaving off 66 to 67; East Pools quiet at 38½ to 39½; East Blue Hills, 3-16ths to 5-16ths; Killifreth, 2 to 3; New Kitty, 1½ to 1½; South Condorow, 8 to 8½. South Frances, 6 to 6½; the various points here are valued in the aggregate at 300½. per fathom. Tincroft, 7½ to 8; West Basset, 1½ to 2½; Wheal Basset, 2 to 2½; West Frances, 5 to 5½; West Kitty, 9 to 9½; Wheal Agar, 16½ to 17½; Wheal Grenville, 5½ to 6½; Wheal Kitty (St. Agnes), 3 to 3½; Wheal Uny, 3 to 3½. New Cook's Kitchen, 3 to 1; some rich stones of tin have been met with in the 175 end west of engine-shaft. Mounts Bay, 3 to 3-16ths; Polberr, 2½ to 2½; South Crofty, 2½ to 3; Trevaunance, 1½ to 2; West Godolphin, 1½ to 1½; West Polberr, 1 to 1½; Goodevere, 1 to 1½; Wheal Metal and Vlow, 5-16ths to 3, and a large business done.

COPPER is not so firm. At the Cornish Ticketing, on Thursday, there was no change in the standards for ore. The average produce was 6½, standard 87½. 15s. 6d. Average price of ore sold, 2½. 6s. 6d. Bedford United, 1½ to 1½. Devon Great Consols, 1½ to 2½; the sale of ore, on Thursday (859 tons), realised 1407½. 6s. 6d. The accounts to be presented to the meeting, and showing six months' returns to Sept. 18 against seven months' costs, show a credit balance of 1210½. 5s. 3d., less 892½. 0s. 9d. due to the Duke of Bedford for royalties. The copper ores sold April 30 to Oct. 31, 4853 tons, realised 8345½. 15s. 9d., or an average of 1½. 14s. 4d. per ton, the lowest price ever obtained by the company. The sales of ore for the corresponding months of last year realised 10,000½. The credit for arsenic is 12,000½, or only 28½ less than the corresponding period of last year. The monthly costs of this mine are about 3000½. The ores in reserve in the mine are estimated at 7936 copper, 12,000 tons mende. Devon Friendship, 3 to 3-16ths; Gunislake (Clitters), 5-16ths to 7-16ths; the sale of ore—177 tons—realised 663½. 18s. 5d. Mellancarr, 3 to 1; New West Caradon, 3 to 3-16ths; Prince of Wales, 5-16ths to 3; the 102 east and 90 west are both improving, and shares have been rather in demand, though leaving off weaker. West Caradon, 2s. to 3s.; the New Caradon, 3 to 4; West Crebor, 1s. to 1s. 6d.; West Seton, 2½ to 3. Wheal Crebor, 1 to 1½; the lode in the 144 west is improving. The points in operation are worth in the aggregate 42 tons of copper ore and 14 tons of mende per fm. The new crusher goes to work this week. South Caradon, 3 to 4; the sale of ore here (320 tons) realised 1043½. 17s. Langford Copper, 3 to 4.

LEAD is pretty firm, and silver is advancing. In shares there is very little doing. Vans are quoted 3 to 3½; the winze sinking below the 120 west is down 15 fms., the lode very congenial and well charged with lead ore. Other works progressing satisfactorily. Great Laxey, 9 to 10; Roman Gravel, 3 to 3½; Leadhills, 1½ to 1½; Weardale, 1½ to 1½; Standard Lead, 1 to 1½; East Wheal Rose, 5-16ths to 7-16ths; Old Shepherds, 7-16ths to 9-16ths; Minera, 5½ to 6½; Ecton, 1½ to 2½. South Darren, 3-16ths to 5-16ths; the two stopes in the 180 west are worth together 3½ tons silver-lead. The winze below the 120 is worth 1 ton.

FOREIGN MINES.—With regard to shares of foreign mines the chief interest has centred in Mysore, from which favourable accounts continue to be received. Should the improvement reported prove to be permanent it cannot fail to have a revivifying effect upon Indian gold mine shares generally; many, however, seem disposed to await the declaration of a reasonable dividend before operating. Alamillos are quoted 1½ to 1½; Almada and Tiritio, 1-16ths to 3-16ths; Asia Minor, 1-16ths to 3-16ths; Balkis, 2s. to 3s.; Birdseye, 3 to 4; Bratsberg have been firmer at 1½ to 1½; Cape Copper, 40½ to 41½; Chile Gold, 1-16ths to 3; Chontales, 1-16ths to 3-16ths; Colombian Hydraulic, 7-16ths to 9-16ths; Colorado United, 2½ to 2½; Copiapo, 2½ to 2½; Fortuna, 2½ to 3½; Frontino and Bolivia, 1 to 1½; Hoover Hill, 3-16ths to 5-16ths; Indian Consolidated, 1-16ths to 3-16ths; Kapanga, 1-16th to 3-16ths. La Plata, 3-16ths to 5-16ths; the telegram received yesterday giving the particulars of the workings for the first half of November shows—Ore received from the company's mine, 375 tons; total ore received, 1800 tons. Ore smelted, 2600 tons; bullion produced, 200 tons; silver produced, 40,000 ozs. Coke secured. The concluding paragraph refers to the strike of coalminers and coke-burners, which, it was feared, would stop supplies of fuel. This had the effect of temporarily diminishing ore deliveries. The strike appears now to be at an end, and both the ore deliveries and the smelting will now resume their normal conditions. Linares, 2½ to 3½.

Mason and Barry, 8½ to 8½; Montana, 3 to 3½; Mysore, 1½ to 1½. Nedenas, 1½ to 2; it is stated that "the 10 points noticed in the report received this week are valued at over 40 tons of 6 per cent. ore per fathom. By the end of this month it is hoped 200 tons of dressed ore will be shipped, and a pile of ore to produce 200 tons of roasted ore from the furnaces is being calcined. New Emma, 3 to 3½; New Potosi, 3 to 3½; Nandydroog, 3 to 3½; Oregum, 2s. to 4s.; Organos, 7-16ths to 9-16ths; Orita, 1 3-16ths to 1 5-16ths. Oscar Gold have advanced to 3½. A telegram has been received, announcing that 130 tons of stuff has been crushed, yielding 3½ oz. of gold to the ton. Panulillo, 2½ to 2½; Quebrada Railway, 3 to 3½; Richmond, 4½ to 4½; the report for presentation at the forthcoming meeting will be found in another column. Rio Tinto, 13½ to 13½; ditto, bonds, 97 to 99; ditto second mortgage, 88 to 90; Ruby and Dunderberg, 3 to 3½; Santa Barbara, 1 to 1½; the exact profit for September was 389½. 3s. 11d. Schwab's Gully, 5½ to 6; South Australia Copper Mines Corporation, 1-16th to 3½; St. John del Rey, 7½ to 7½; Tharsis, 5½ to 6; Tolima, 6 to 6½; United Mexican, 2½ to 3½, x.d.; the usual telegram states that the excess of returns over outlay on the Mine of San Cayetano de la Overjera for the week ending Nov. 15 is \$5100 loss on El Diamante, \$460. Western Andes, 4½ to 5½.

The Market for Mine Shares on the Stock Exchange shows no material improvement as compared with last week. At certain times there has been a spurt, but it has not lasted many hours, and the relapse has left the market worse than before. The metal market has been much in the same condition—tin, copper, and lead have all been dealt in at fractional advances, but close slightly lower than last week. This class of business is not looked upon unfavourably; it indicates healthy dealing, although there is too little of it to force up quotations. The virtual settlement of the Parliamentary difficulties has likewise created a better feeling, and it is understood that a new American mine which has been ready for launching for some weeks, but has been delayed through the uncertainty caused by political complications, will indeed issue its prospectus next week. A French silver-lead enterprise is also to be brought out, so that there is altogether an appearance of reviving activity which is much required.

Our usual telegram from Cornwall this evening says:—The belief has gained strength this week that the price of tin would improve, and strong hopes were entertained that an advance in the standards would take place; but up to this evening the smelters have made no change. The tone of the Cornish share market has exhibited more signs of firmness, and there has been a disposition to seek after a few shares now standing remarkably low, and which have an improving appearance. Leading shares continue very firm, and both Dolcoaths and East Pools are stronger. Dealings have been principally in Dolcoaths, East Pool, West Frances, Tincroft, Carn Breas, West Basset, Wheal Basset, and Wheal Agar. At Botallack meeting, on Wednesday a loss of 540½, on three months' working, and a total debit balance of 4419½ was reported, and a call of 1½. per share was made. The price realised for tin was 3½. 7s. 6d. per ton less than last quarter. At Truro yesterday 1964 tons of copper ore realised 4476½, the standards remaining stationary. An improvement is reported at Wheal Agar in the 195.

With regard to the lead market, a correspondent writes:—Having read in last week's Mining Journal the interesting article entitled, "Future Prospects of Lead," the question suggests itself, how is it that some of the lead producers do not give their support to the "Warrant System?" which is now applied to lead as well as to other metals. I should have imagined that producers would have been unanimous in taking advantage of a system so obviously favourable to them. It seems to me that any movement which has its main object the assistance of trade during the continued depression is worthy of general support.

Devon Great Consols, 2½ to 2½; the monthly sale of copper ore on Thursday realised 1407½. The report of the directors and managers, with the half-yearly statement of accounts, has been issued to the shareholders, previous to the general meeting to be held next week. The accounts and report are much more satisfactory than could have been expected, in the midst of the great depression, in the price of copper and metals generally.

Devon Great United, 3 to 4; the sale of copper ore on Thursday last realised 223½. 6s.

Drakewalls, 4 to 4½; and reported to have been in demand. The sale of ore—10 tons of black tin—on Tuesday, realised 425½. 8s. 6d. The sinking of the shaft is being pushed forward with all expedition, as well as the new shaft on the new lode, and both places are producing good tin ore for the stamps.

Ecton, 1½ to 2½; the Ecton Mines are, according to latest reports, still opening out remarkably well, and it looks as if the somewhat sanguine opinions that have been expressed will be amply fulfilled. The manager's chief occupation at present is the providing of crushing and dressing machinery in order to treat the vast deposits of copper, blende, and lead ores believed to exist in the Clayton, Water Bank, and East Ecton Mines, which are now the scene of much activity both at surface and underground. By-and-bye the other mines belonging to the company, including the famous Old Ecton Mine, which yielded such fabulous riches nearly a century ago, will be taken in hand and set to work in accordance with modern ideas as to economical mining. As to the company's operations generally a correspondent who recently visited the spot informs us that the amount of work already accomplished, in little over a year, is simply astonishing; and he says that everything at all three of the mines in operation has been laid out in the best manner and with strict observance as to economy; and he was much struck with the very efficient and durable machinery, which has been acquired at such moderate cost. Mr. Bowman's latest report says:—All points in the mine are looking fully as well as before reported, and the water in the Clayton shaft is now being reduced very rapidly.

Kit Kill Great Consols, 3 to 3½; the engine-shaft is now down



within 6 fms. of the required depth for the driving of a level to communicate with the great tunnel level, which is being pushed on as fast as possible, in order to accomplish this object.

South Devon United,  $\frac{1}{2}$  to  $\frac{3}{4}$ ; the sale of copper ore this week was 426l. 7s. At the extraordinary meeting of shareholders on Thursday last the meeting was of an harmonious character, and the resolutions submitted were unanimously carried.

South Frances,  $\frac{1}{2}$  to  $\frac{3}{4}$ ; and have been in demand all the week, and appear scarce. The various operations throughout the mines continue to look well.

In Lead Mine Shares there has been no appreciable change, and the price of lead remains without improvement. Roman Gravel is quoted  $\frac{3}{4}$  to  $\frac{1}{2}$ , and, a correspondent writes, they are "enquired for at the present low price, which is about a seventh of what these shares formerly were. The last month's sale of lead ore was 200 tons, and realised 1440l., which will leave a good profit, notwithstanding the present low price of ore. The general feeling is, however, that a considerable rise in the price of lead will shortly take place."

Leadhills,  $\frac{1}{2}$  to  $\frac{3}{4}$ ; "with a demand for these shares, it is said, from Scotland at the present greatly depressed prices. The several points of operations throughout the mine continue to open out well, with a good demand for the company's pig-lead at better prices."

The London and South African Exploration Company have advice of remittances amounting to 5070l. for the last four weeks, making, with the 49,670l. previously advised, a total of 54,740l. for 48 weeks to Nov. 22.

The first half-yearly interest on the North-Mexican Silver Mining Company's Seven per Cent. Debentures is now being paid at the company's offices, St. Helen's-place.

Messrs. C. de Murrieta and Co. announce that the coupons due Dec. 1 of the Argentine Government Six per Cent. Railway Loan of 1881 will be paid by them on and after that date.

It is notified that the half-yearly interest due on Dec. 1 on the Florida Land and Mortgage Company Seven per Cent. First Mortgage (Land) Debentures (being coupon No. 2), will be paid in London on and after that date.

The South London Tramways Company traffic returns for the week ended Nov. 15 show—Receipts, 1147l. 3s. 6d.; receipts for corresponding week last year, 836l. 3s. 7d.; receipts from Jan. 1 to date, 51,378l. 1s.; receipts for corresponding period last year, 29,748l.

**GAS SHARES.**—The principal business in these shares, according to this evening's report of Messrs. W. L. Webb and Co., of the Stock Exchange and Finch-lane, has been:—Bahia (Limited), Ordinary, 25½; Brentford, New Stock, 15½ to 15¾; Buenos Ayres, New (Limited), 11½ to 12½; Continental Union (Limited) Original, 37½ to 38; ditto, 7 per cent. Preference, 31½; European (Limited), 21½ to 22½; Gas Light and Coke, A. Ordinary, 217½ to 220; ditto, C, D, and E, 10 per cent. Preference, 233½ to 240; ditto, G, 7½ per cent. Preference, 165½ to 167½; ditto, H, 7 per cent. Preference, 149½ to 150½; ditto, J, 10 per cent. Preference, 237; Imperial Continental, 203 to 205; Monte Video (Limited), 17½ to 17¾; Oriental (Limited), 8½ to 8½½; ditto, New, 107½ to 108½; Para (Limited), 4½½ to 5½; Rio de Janeiro (Limited), 22½ to 23; South Metropolitan, B, 21½ to 21¾. Gas stocks continue to improve. Imperial Continental Gas, A, have risen from 27 to 37.

**INSURANCE SHARES** have, according to this evening's report of Messrs. W. L. Webb and Co., of the Stock Exchange and Finch-lane, been dealt in as follows:—Alliance Marine, 22; Atlas, 16; City of London Fire (Limited), 9½ to 10½; ditto Marine Insurance Corporation (Limited), 1½½; Commercial Union, 15½ to 16½; Fire Insurance Association (Limited), 1; Guardian Fire and Life, 64 to 65½; Imperial Fire, 153; Indemnity Marine, 16½ to 16¾; Lloyds, 4½; London, 51 to 51½; Merchants Marine (Limited), 1½; North British and Mercantile, 27; Ocean Marine (Limited), 5½; Railway Passengers, 7 to 7½; Rock Life, 6½ to 7½; Royal Exchange, 401. Insurance steady. Universal Marine ½ per cent. higher.

The **ABERFOYLE SLATE QUARRIES COMPANY** report that the amount of capital expended in opening up the quarry, providing plant, erecting workmen's houses, and making railway, &c., during the year has been 3140l. 12s. 2d., making the total capital expended to date 7434l. 1s. The profit on the manufacture and sale of slates, including rent of houses, &c., during the year is 725l. 18s. 9d., from which 160l. has been set aside towards extinguishing capital outlay, thus making the sinking fund 246l. 10s. 5d. The balance of profit to be dealt with by the meeting will thus be 585l. 18s. 9d. The directors recommend that a dividend at the rate of 6 per cent. per annum be declared, which will absorb 327l. 18s. 9d.; that the preliminary expenses, amounting to 95l. 7s. 3d., be written off, and that the balance of 142l. 12s. 9d. be carried to the reserve fund, which will then amount to 355l. 12s. 1d. The additional capital of 5000l., authorised at last meeting, was issued during the year to the present shareholders. It is expected that the railway, which is now in the hands of the contractors, and is being rapidly pushed on, will be completed, and ready for traffic about the month of January. Mr. James R. Forman and Mr. Arthur A. Govan, directors, and Mr. Wm. Stewart Brown, auditor, retire at this time, but are eligible for re-election. At the meeting of shareholders, held on Wednesday, the report was adopted, and the retiring directors and auditor were re-elected.

**SOUTH STAFFORDSHIRE—MINES DRAINAGE IN THE OLD HILL DISTRICT.**—A proposal to make a draft mines drainage award for the Old Hill district was under consideration by the arbitrators under the South Staffordshire Mines Drainage Acts, at Wolverhampton, on Thursday. Mr. G. M. Dowdeswell, Q.C., presided. The fall rate required, it was announced by Mr. Collis, was 3d. per ton on fire-clay and limestone, and 6d. per ton on ironstone, coal, and slack. This was the same as last year. His last year's estimate was that the sum required would be 11,250l., and the rate made amounted to 11,250l. Thus there was only the smallest margin for all contingencies. During the year some pits had been closed, but others had been opened in their place, and it was anticipated that the tonnage raised in the ensuing year would be almost precisely the same as in the 12 months now lapsing. The case of the Earl of Dudley was taken first. His lordship raised 200,000 tons on which the rate was only 4d., and 50,000 tons at a rate of 2d. Possibly his lordship would like the arbitrators to turn that 4d. rate in their new award into 1d. Out of the 11,000l. required for expenditure, 4000l. was needed for the common charges of the Commission, which was equal to nearly a 2d. rate. He did not think the Earl of Dudley would be wise in trying to upset last year's arrangement. He had better leave well alone.

On behalf of Lord Dudley, Mr. W. Jeffries stated that there was no difference whatever in the circumstances of any of his lordship's collieries included in the award as compared with last year. The Saltwells Colliery was then graduated to 1-12th of the full rate, and the Dudley Wood Colliery, and that part of the Warren's Hall colliery that lay to the north-east of the Russell's Hall fault were graduated to one-third. He applied that they should this year be graduated to the same sum as before.—Mr. Collis said that the Commissioners did not oppose the application. Messrs. Skidmore and Skelding, of the Waterfall Lane Colliery, applied through Mr. Waldron, solicitor, for graduation. The grounds of the application were that the adjoining Tump Colliery, occupied by Mr. Bassano, were closed eighteen months or two years ago, and that the water from that mine now flowed into the applicant's mine, necessitating its being drawn by tanks at a cost of 400l. a year. The depth of the colliery to the bottom of the Thick coal was 240 yards. Mr. Jeremiah Skidmore, one of the partners, gave evidence in support of his case. They dragged some 200 or 300 tons of water a week.

Mr. Collis opposed the application, contending that the only water the applicants had to deal with was pocketed water. If they would make a connection of 100 yards with the Commissioners' level to their Waterfall-lane engine all the water would run away from them. The Commissioners would offer the applicants every facility for driving the level from the Commissioners' side. The case was before the Commissioners on Tuesday, and they could not see that there was any good ground for the applicants' claim. If they consented to graduation in this case every little colliery in the district would claim the same.—Mr. Collis said that all the firms in that neighbourhood had to pump their own local water, and yet they obtained no graduation.—Mr. Skidmore: We are already paying rates amounting to 600l. a year, and we cannot continue paying that and 400l. for raising water. The Court intimated that they could not allow graduation.—Mr. Waldron now applied that the Commissioners would assist his clients in making a connection. Mr. Collis remarked that the Com-

missioners would give the firm every facility. Mr. Bassano was now driving a level of 100 yards, his (Mr. Collis's) own firm would have to make one of 300 yards, and Messrs. Hingley were driving one of 500 yards—all at their own expenses.—Mr. Dowdeswell, with the concurrence of his colleagues, desired Mr. Collis to convey to the Commissioners the opinion of the Court that the Commissioners should do all they could to facilitate the suggested level driving by the applicants.—This was all the business, and the arbitrators arranged for the early signing of the draft award.

**DRAKEWALLS UNITED.**—The prospects here, it is stated, become more favourable since the change in the local management. The mine is now cleared to the bottom, and sinking begun much sooner than was anticipated. Capt. Gregory reports that he has set to contract the first 15 fms. to be sunk, which he hopes will be completed during the next six months. The policy of the directors indicated in their last report has so far proved entirely successful, and though fearing to hold out prospects based on so short an experience, they think it right to say that they trust ere long to speak more confidently as to the future.

**NORTH MEXICAN SILVER.**—It will be recollected when this company issued its prospectus last spring that the directors not only made arrangements with the vendor that he should derive no profit until those invited to supply the capital had the whole of their capital repaid to them, but also provided that they should be at liberty to return the property to the vendor after three months' working if they were not satisfied with its prospects. The managing director was sent out to report. He has just returned, and his report sent to the debenture-holders, the subjoined being an epitome of it. He appears to have taken great care to thoroughly investigate everything in a business-like manner, and the directors purpose shortly to call a meeting, at which he will be present to afford any further information to the debenture-holders. To effectually prevent the vendor making any profit the capital was raised by debentures, accompanied by a like amount of shares. They are 20l. each, 7½ paid, and at the four-monthly meeting the debenture-holders passed a resolution recommending the board not to issue any further debentures on the same terms. Enquiries are reported to have been made for the debentures without sellers being found.

**OSCAR GOLD MINE.**—A telegram has been received from the manager (Mr. J. Daw, jun.) as follows:—"130 tons, above ½ oz.; coming by Domingo; result most satisfactory." The above is for most of the time with only 10 stamps, and then 15, owing to the pipes not being large enough to supply water to the whole 20. Larger pipes have been sent out, and the whole of the stamps are now probably at work. It is stated that Oscar alone can supply enough to employ 40 heads of stamps for almost an indefinite period, and the profit at even ½ oz. per ton would give a very large return on the comparatively small capital of the company. But there are at least 14 other discovered lodes, most of which have yielded remarkably rich results from large samples even roughly bruised and washed, so that by simply multiplying the number of stamps as may be necessary the aggregate profits from the whole resources of the property will be immense. The above is the first crushing, and probably includes the poor stuff at first used to make the floors; the future ones are expected to be much better. Mr. J. Daw, jun. (the manager) is expected in London on Tuesday, when the shareholders will no doubt have an opportunity of obtaining the fullest information.

**NEDERES COPPER MINES.**—The agents' report, dated Nov. 11, is most satisfactory. At Skymur the 60 fm. level has improved in value to 1½ ton of 6 per cent. ore per fathom, and was expected to be of much higher value in a few days. The stopes in this level are worth 30 tons of 6 per cent. ore; and the winze below the 25 and rise above the 50 produce together 9 tons of similar ore per fathom. The communication between these two points was expected to be completed at the end of last week, when a most valuable section of ore ground would be available for more stopes. Miners would soon be engaged for driving the 75, and working stopes in that level. They were driving on the recently intersected north lode at the 50 fm. level, and look for important results here. The roasting of the rough ore had been commenced. They hope to be able to ship 200 tons of dressed ore (probably 12 to 15 per cent.) by the end of this month; but, if deferred two or three weeks, they believe the quantity can be increased to 250 tons besides 50 tons of regulus. On the whole, the property is turning out exceedingly well, and quite equal to what it was expected to do by those who knew it.

Mr. THOMAS RICKARD, M.E., of Messrs. Rickard Brothers, Lombard-street, London, has left on a periodical visit to the mines with which he is connected in the United States.

**CALVERT'S MECHANICS' ALMANAC.**—The twelfth annual edition—that for 1885—of Calvert's Mechanics' Almanac and Workshop Companion has just been issued—Manchester: The Author, Great Jackson-street—and has been, as usual, thoroughly revised to date. It contains all that it professes—a large amount of practical, technical, and industrial information, especially instructive and entertaining to artisans. There is much to study, and he must be a dolt indeed who cannot obtain far more than fourpence worth of knowledge by studying it.

#### COPPER ORES.

Sampled Nov. 5, and sold at the Royal Hotel, Truro, Nov. 20.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
Devon Great Consols. 112	.....	£1 3 0	South Caradon	.....	23 6 6
ditto	.....	1 1 6	ditto	.....	5 14 6
ditto	.....	1 5 6	South Devon United	.....	1 19 0
ditto	.....	1 4 0	ditto	.....	3 3 0
ditto	.....	1 1 6	ditto	.....	1 4 6
ditto	.....	1 0 0	ditto	.....	2 2 0
ditto	.....	1 4 0	ditto	.....	1 19 0
ditto	.....	3 13 6	Gunnislake (Clit.)	.....	3 7 6
ditto	.....	3 13 6	ditto	.....	4 0 6
ditto	.....	2 1 4 6	Bedford United	.....	3 4 6
ditto	.....	2 10 16 6	ditto	.....	2 19 6
ditto	.....	1 17 0 6	ditto	.....	2 1 0
South Caradon	.....	3 0 6	Holmbush	.....	1 1 6
ditto	.....	7 25 6	ditto	.....	1 0 0
ditto	.....	6 216 0	Devon Great United	.....	2 13 0
ditto	.....	3 18 6	Prince of Wales	.....	3 16 0

TOTAL PRODUCE.		
Devon Great Con.	889	£1407 6 6
South Caradon	320	1043 7 0
South Devon Uni.	200	428 0 0
Gunnislake (Clit.)	177	653 18 6

Average standard	.....	£ 37 18 0
Quantity of ore	.....	1984
Amount of money	.....	£ 476 2 6
Quantity of ore	.....	1984
Quantity of fine copper	.....	112 tons 7 cwt.
LAST SALE.—Average standard	.....	£ 4 1 0
Standard of corresponding sale last month	.....	£ 87 10 0

COMPANIES BY WHOM THE ORES WERE PURCHASED.		
Names.	Tons.	Amount.
Vivian and Sons	426½	£ 538 9 9
P. Grenfell and Sons	298½	741 14 3
Nevill, Druce, and Co.	298½	524 10 3
Williams, Foster, and Co.	401 5-8	890 0 9
Elliott's Metal Company	204½	501 2 9
Charles Lambert	284 5-8	982 4 9

Total ..... 1984 ..... £ 476 2 6  
NO SALE on Thursday next.  
Copper Ores for sale at Tab's Hotel, Redruth, on Thursday week.—Mines and parcels.—Mellancar 53½—Levant 208—New Cook's Kitchen 105—Violet Seton 63—Wheal Coates 16—North Busy 14.—Total, 939 tons.

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50 Carn Camborne, 5s.	100 Trevaunance, 3s. 6d.	100 La Flaca, 5s. 3d.
80 Collacombe Cons., 4s.	50 Trevaunance, 37s. 6d.	100 Last Chance, 1s.
10 Devon Con., 2½.	50 West Crebor, 1s. 6d.	100 Lisbon-Berlyn, 7s.
105 D. Friendship, 2s. 6d.	10 West Kitty, 2½.	50 Montana, 18s. 3d.
25 Drakewalls, 2s. 6d.	25 West Pollice, 4s. 6d.	50 Mysore Gold, 3s. 9d.
40 East Blue Hills, 5s.	20 Wheel Basset, 22s.	20 New Emma, 14s.
25 Ecton, 41s. 3d.	50 Wheel Crebor, 23s. 9d.	100 Nouveau Monde, 3s.
100 East Wh. Rose, 3s.		100 Nundydoo, 11s.
15 Frongeh, 8s. 9d.	50 Asia Minor, 2s. 6d.	100 Oscar Gold, 12s. 6d.
100 Goginan, 2s. 3d.	100 Akankoo (f.p.), 4s. 6d.	50 Orita, 25s.
10 Great Laxey, 2½.	250 Balkis, 3s. 9d.	50 Organo, 10s.
50 Gunnislake (Clit.) 8s 6d.	25 Bratsberg, 23s. 6d.	25 Orita, 25s.
20 Great Holway, 15s.	45 Cartago, 12s. 6d. 7s.	100 Potosi, New, 15s. 6d.
50 Home Mines Trust,	100 Cankim Bamoo, 2s.	100 Port Phillip, 2s. 3d.
ex div., 21s. 6d.	10 Copiapo, 2½.	100 Potosi, New, 15s. 6d.
20 Killfith, 15s.	50 California Gold, 10s. 3	100 Port Phillip, 2s. 3d.
100 Kit Hill Gt. Cons., 6d	170 Callao Bis, 15s.	100 Potosi, New, 15s. 6d.
10 Kitty St. Agnes, 15s.	100 Chile, 2s. 6d.	50 Ruby, 10s. 6d.
100 Mounts Bay, 2s. 6d.	30 Chontales, 2s. 9d.	100 Richmond, 2½.
15 New Kitty, 23s. 6d.	90 Colombian Hyd., 9s 9	20 Rio Tinto, 21½ 16s. 24
100 New West Caradon, 3s.	50 C. Sth. Austr. Cop, 2s.	14 Schwab's Gully, 45½.
100 Old Shepherds, 11s. 9	50 Denver Gold, 2s.	40 Spitzkop, 13s.
20 Phoenix United, 32s 6	50 Frontino, 12s.	100 Tacuahu, 1s. 6d.
20 Polberro, 42s. 6d.	50 Glenrock, 3s. 6d.	25 Tocopilla, 3s.
50 Prince of Wales, 6s. 3	100 Gold Coast, 3s. 9d.	11 Tolima A, 26½.
80 Parys Copper, 1s. 6d.	30 Hoover Hill, 5s.	50 Transvaal Gold, 15s. 6
15 Roman Gravel, 70s.	250 Indian Consol., 2s. 9d.	20 Mexican, 23 3s. 9d.
20 South Caradon, 13s 9d	20 Ja-rall, 4s.	100 Victoria Gold, 5s. 6d.
10 S. Condurow, 28½.	50 Kohinor B, 3s. 6d.	100 West Callao, 5s. 6d.
20 South Darren, 5s.	100 Kongsberg Silver.	

\* S. JAMES can buy or sell any of the above shares. Correspondence  
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EXAMINATION FOR MANAGERS' CERTIFICATES OF COMPETENCY.

DISTRICT UNDER THE CHARGE OF JOSEPH DICKINSON, Esq.,  
H.M. INSPECTOR OF MINES.

NOTICE IS HEREBY GIVEN, that an EXAMINATION for  
MANAGERS' CERTIFICATES OF COMPETENCY, under the above-  
named Act, will be HELD on the 17th day of December next, and CANDI-  
DATES INTENDING TO PRESENT THEMSELVES AT SUCH EXAMI-  
NATION must, on or before the 15th day of December, notify such intention  
to the Secretary of the Board of the above-mentioned District, from whom  
all information as to particulars can be obtained.

By order of the Board, MASKELL WM. PEACE, Secretary.

King-street, Wigan.

N.B.—Persons who do not reside within the District are equally eligible for  
examination with those who do.

### NORTH MEXICAN SILVER MINING COMPANY (LIMITED).

ISSUE OF £60,000 SEVEN PER CENT. FIRST MORTGAGE DEBENTURES.  
Notice is hereby given, that the FIRST HALF-YEAR'S INTEREST on the  
above Issue of Debentures is NOW BEING PAID at the company's office.

F. W. PORTER, Secretary.

20, St. Helen's-place, London, E.C.

### RICHMOND CONSOLIDATED MINING COMPANY (LIMITED).

Notice is hereby given, that the HALF-YEARLY GENERAL MEETING of  
the shareholders of the Richmond Consolidated Mining Company (Limited)  
will be HELD at the City Terminus Hotel, Cannon-street, London, on  
TUESDAY, the 2nd day of December, 1884, at Two o'clock in the afternoon, to  
receive the report of the directors for the half-year.

By order of the Board, HUBERT AKERS, Secretary.

44, Coleman-street, E.C., 20th November, 1884.

### LE MOUVEMENT INDUSTRIEL BELGE.

REVUE TECHNIQUE, COMMERCIALE, ET FINANCIERE,  
sous la direction de Mr. l'Ingénieur P. DESGUIN. Paraît le 4 Juillet,  
1884, et successivement les Vendredis de chaque semaine. Il contient des  
articles d'actualité sur l'agriculture, la navigation, les mines, la construction,  
les machines, les chemins-de-fer, les canaux, les travaux publics, le droit indus-  
riel et commercial, les inventions, et les perfectionnements, et principalement  
sur l'Exposition Internationale d'Anvers, dont il publiera les plans, les dessins,  
et documents de tous genres.

#### TEXTE ILLUSTRE DE BELLES GRAVURES.

Abonnements annuels:—Belgique, 25 francs; pays voisins, 30 francs.  
S'adresser à Mr. NICOLAS PASTRE.

Ingénieur-Administrateur.

Rue des Croisades 32, à Bruxelles.

### NOW PUBLISHING, PRICE 30s., THE THIRD EDITION OF

KELLY'S DIRECTORY OF THE MERCHANTS,  
MANUFACTURERS, AND SHIPPERS OF THE  
UNITED KINGDOM:  
Being a Guide to the Export and Import, Shipping, and Manufacturing  
Industries of the United Kingdom, with the Colonies and Foreign Countries.

This work gives a vast amount of information respecting the business carried  
on between the United Kingdom and the Colonies and foreign countries, showing  
the description of goods and the amount thereof exported to each Colony or  
country abroad, the British ports whence shipments are made, the merchants,  
factors, and shippers at the various ports and towns in England, the manufac-  
turers of the principal goods exported, and the merchants and others abroad who  
are importers or buyers of British goods.

It also gives complete information as to the various descriptions of goods, and  
the amounts thereof imported from abroad into this country, with the names  
of the merchants and shippers, and also the manufacturers at the principal  
towns of the various goods imported.

The work is divided into three principal divisions, the first of which comprises  
the various foreign countries and British possessions throughout the world to  
which British manufactures are exported.

Under each of these is given, first—a statistical account of the country; the  
financial position; business relations with this country, with, in the case of  
foreign states, the names of the British and other Consuls; the name of the  
Minister in this country; Consuls, Vice-Consuls, &c., at the various ports and  
places in this country; the principal bankers, the merchants, commission  
merchants, buyers of English goods, and the manufacturers, &c., at the principal  
towns of the various goods imported; the various ports in each country; also  
the ports in this country whence shipments are made; tariffs, &c., &c.; a tabular  
statement showing the exports from this country during the last three years; a  
list of the merchants and shippers in the various British towns; list of steamers  
and other vessels sailing from the ports; also a list of the various manufactures  
that are exported from this country.

The second division comprises an alphabetical list of the exporters from this  
country, stating the class of goods exported by them.

The third division of the work embraces the names and addresses of the actual  
manufacturers, or manufacturers' agents, of the articles exported, describing as  
clearly as possible the specialities of each manufacturer.

"It is almost exhaustive as a guide to the shipping and manufacturing indus-  
tries, both export and import, of Great Britain and Ireland."—*The Times*,  
Sept. 20th, 1884.

"Merchants and manufacturers of all kinds will find the Directory a valuable  
guide, whether their interests are concerned in exports or imports."—*Daily  
Chronicle* Sept. 12th, 1884.

"It attains in information of the kind which merchants, manufacturers, and  
exporters are constantly in need of. Its scope, however, is not confined to the  
classes who in this country have business with the colonies and foreign parts;  
but includes also the principal merchants abroad, so that the book becomes a  
tolerably complete guide to the import and export industries of all countries  
with which Great Britain has any mercantile relation, and vice versa."—*Daily  
News*, Sept. 17th, 1884.

"In collecting the names of foreign and colonial firms—a task of considerable  
difficulty, as will be understood—Messrs. Kelly have had the assistance of the  
British Consuls, many of whom have given personal testimony to the important  
service this Directory fulfils in commercial circles abroad."—*European Mail*,  
Sept. 26th, 1884.

London: KELLY and Co., Publishing Office, 51, Great Queen-street, W.C.

Mr. P. S. HAMILTON (late Chief Commissioner of Mines for  
the Province of Nova Scotia), PRACTICAL GEOLOGIST, MINING  
AGENT, and MINING ENGINEER, HALIFAX, NOVA SCOTIA.  
PURCHASES and SALES of MINING PROPERTY effected, with careful re-  
gard to the interests of clients.

## Notices to Correspondents.

**ERRATUM.**—In the article on the Future Prospects of the Lead Trade the mis-  
print of a single letter renders the last sentence almost unintelligible. It should  
read:—"Of all the markets, no doubt the lead has as healthy a prospect before  
it as any of them; and before very long it will, no doubt, be beyond the present  
depression, when with the assistance of the 'warrant system,' it will  
become more certain, and those who last (and lost) through the present de-  
pression should be in a sufficiently healthy financial position to be able to unite  
in preventing a future low market price, the best prevention for which will  
be the successful supporting of the 'warrant system,' as already started in  
the lead trade, but which, as it was when first applied to other metals, gains  
favour only slowly, but steadily and lastingly."

**SHARE DEALING.**—I was induced to buy shares in two Coal-book mines last  
year, being assured they would double their value in one month, and that the  
seller would give me double for them if I would sell; but, alas, it has been quite  
the reverse, they have gone down, and are, in fact, unsaleable at present.  
Added to this I have to pay calls every four months. Will you kindly let  
me know whether I can compel the seller to repurchase? I hold his promise  
in a letter.—D. P. D.: *Barnstaple*.—(You should have entered into a contract  
when you bought the shares to sell at the double value on the fixed day; that  
is to say if the seller consented to sell on such terms. It would de-  
pend upon the terms of the seller's letter whether the Court would regard it  
as a definite agreement. If it were of such character it should have been  
stamped within 14 days of date. You can get it stamped now if you wish it,  
but the Stamp Office will charge you a fine of 10s.)

**ANGLO-MEXICAN MINING COMPANY.**—Owing to an informality in the address of  
two of Dr. Dearnley's letters they were received together; and, in the case of the  
first of them, not until a week after it was written. I replied, asking for a missing  
reel, and on Nov. 11, in reply to his of Nov. 9, I wrote giving him all the in-  
formation he desired. That letter had evidently not reached him when he  
wrote to you on Nov. 12. I may, perhaps, be permitted to state that the ad-  
vices from the manager respecting the mine are exceedingly satisfactory, and  
that a report will shortly be issued.—JAMES FORD, Secretary.

## THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, NOVEMBER 22, 1884.

### TRADE DEPRESSION—ITS CAUSES AND REMEDIES.

The motion which Lord DUNRAVEN made in the House of Lords a  
few days ago to the effect that a Royal Commission should be ap-  
pointed to enquire into the causes of the present depression of trade  
has given rise to a good deal of newspaper writing and much discus-  
sion in commercial circles. Those who are engaged in our mining op-  
erations and our staple manufactures did not need to be told with the  
emphasis used by his Lordship that a good deal of depression exists—  
unfortunately that is too self evident; but we take the liberty to  
suggest that his Lordship took a far too gloomy a view of the pre-  
sent state of trade and its prospects; whilst the means he suggested  
for its amelioration would not have the remedial effect, if indeed it  
would not tend in a contrary direction. We may say, at the outset  
of these remarks, that, from a pretty accurate knowledge of the state  
of trade in the great centres of manufacture, there is nothing to  
cause anxiety or alarm, nor is there any ground for the drastic mea-  
sures which some well-intended but indiscreet theorists would put  
into operation. Those who take such a gloomy view of the condition  
of trade seem to forget that these seasons of depression are periodical  
—they have existed from time immemorial, and will probably  
exist, in more or less intensity, as long as our commerce and manu-  
factures exist. There are the seven years of famine, as well as the  
seven years of prosperity. There is the ebb and flow of the commer-  
cial tide, when trade and its various ramifications affect every class,  
from the wealthy manufacturer to the lowest operative, and the present  
depression is no exception to the general rule, and we may rest  
assured also that the return tide of prosperity will again set in, and  
in all probability far earlier than some are inclined to believe.

Brushing aside all the sophistries which surround this question,  
Lord DUNRAVEN's motion was an attempt to re-introduce Protection  
under another guise. "Fair Trade" is certainly a most attrac-  
tive figure of speech, and carries considerable weight with those who  
do not care to look below the surface. The argument of the so-  
called "Fair Traders" is that if one country does its best, by impos-  
ing high tariffs, to keep out English manufacturers, it is only fair  
that we should, also by high tariffs on imports, keep out theirs. That  
is to all intents the old doctrine of Protection. But would it have  
the desired result? We think not. It would, of course, raise the  
price of home manufactures; but this would at once check demand,  
and there would still be more trade depression. Protection exists in  
America and in most of the European countries; but, strange to say,  
it has not proved the panacea for all the commercial ills to which  
those nations are subject. Despite the attempts of America to ex-  
clude English manufactured goods, their iron, steel, and other of  
their staple industries are far more depressed than are the English  
manufactures and trades—in fact, the shutting out of all foreign  
competition in iron and steel has almost extinguished the American  
shipbuilding trade, and other branches of industries are checked and  
thwarted by the high price of American steel and iron. This is a  
nut which "Fair Traders" are unable to crack; but it is a fact which  
cannot be gainsaid or ignored, however theorists may attempt to  
pooch-pooch it.

Our staple manufacturers and our merchants may rest assured that  
our country will never again return to Protection, however long or  
severe the periodical depressions of trade may exist. The causes  
which have brought about the present depression are altogether out-  
side our Free Trade policy. Overproduction lies at the root of the  
condition of our staple trades. There has been such a plethora of  
unemployed capital at command that its possessors were too ready  
to invest it in channels which were believed at the time to be most  
prosperous. Previous to the present depression (which, after all, has  
not been of nearly so long standing as some would wish the country  
to believe) the shipping trade was probably one of the most flourish-  
ing of all trades. Hence there was quite a mania for shipping—iron  
and steel vessels, steamships especially, multiplied at a prolific rate,  
until at length our carrying capacities were far larger than our re-  
quirements. Freight rates steadily fell, and at length came the collapse.  
Scores of vessels were laid up idle in our chief ports, freights being  
unremunerative—shipbuilding came to an end, and our iron and steel  
yards to almost a standstill. The old doctrine of supply and demand  
over again—and our trade and commerce will not right themselves  
until the normal balance is struck; but it assuredly will when that  
time does come, and we shall yet see prosperous times in this Eng-  
land of ours, notwithstanding the wails of Protectionists and the  
croakings of pessimists.

Remedies almost innumerable have been proposed to bring about  
a better condition of things. The very scant encouragement which  
Lord DUNRAVEN received is proof that Protection or "Fair Trade,"  
as it is now more euphoniously termed, may be put on one side as  
altogether out of the question. Nor should we like to see another  
almost equally drastic remedy carried into effect. Emigration, on a  
wholesale scale, aided by Government, is the antidote propounded  
by some. But, unfortunately, when practically applied upon any  
large scale it is found that the industrious sober artisan—the second  
class of our community—are those who avail themselves of the spe-  
cial facilities placed at their disposal. The "drone" in the hive  
—the dissolute and wretched—are left behind. The industrious  
mechanic possibly finds that he has not bettered his position by emi-  
grating to a country whose manufactures are equally depressed, or  
he turns his avocation into competition with the mother country.  
Looking, again, at this question of trade depression from a "Trades  
Unionist's" point of view, the remedy suggested is that the working  
classes should have a larger share in the profits of industry. Let the  
country, say these working men, spend more money in wages, in-  
stead of hoarding it up. But it has been conclusively shown that it  
is the vast sums sent into trade that has produced over-production,  
and caused the collapse. The secret does not lie here. The fact is  
that Trades Unionism has very much to answer for the present con-  
dition of things. There is a dastardly spirit of "Boycotting" which  
is inimical to the best interests of both employer and employed. It

is positively asserted that the riveters in the yard of Messrs. NAPIER  
and SONS have struck work rather than accept piecework rates at  
which they could easily make 8s. per day! Some of the best dis-  
posed men were ready to accept these terms, but "they were stoned  
by the men on strike, and had to work under police protection."  
This suicidal policy on the part of the workmen in the present state  
of trade is one of the most effectual means of procrastinating the  
dawn of better times, which all are so anxiously looking forward to.  
Makers of iron and steel, shipbuilders, and manufacturers generally  
are naturally reluctant to accept contracts when their workmen are  
at the behest of Trades Unionists, and when they demand terms  
which engender strife in the workshops, and prevent that mutual  
relationship which is at the foundation of our national industry.

### COMPRESSED AIR FOR UNDERGROUND WORK.

In connection with mining operations no greater progress has been  
made than in the application of compressed air as a motive power.  
It is only about 25 years since it was introduced by Mr. LONGBRIDGE,  
who took out a patent for improvements in motive power for the  
conveyance of minerals and other purposes in mines, and the inven-  
tion for several years was not much thought of; but now it has be-  
come a matter of no ordinary importance in the economical working  
of mines. In the first instance, there was a great loss of power by  
the compressing of the air, whilst the exhaust cylinder not unfre-  
quently was blocked up by the vapour in the air becoming frozen as  
it came from the cylinder. These defects have now been overcome,  
and some recent improvements have been added, which have made  
compressed air the underground motive power in all well-equipped  
mines where there is extensive haulage. Compressed air, no doubt,  
is more costly than steam; but there is the great advantage to  
counterbalance the difference of cost that compressed air can be  
placed in the most distant part of a mine where it would be in the  
highest degree dangerous to have steam-engines and boilers. As to  
the freezing of the vapour, this has been overcome by making the  
exhaust pipe larger in proportion than those made for steam, and  
allowing the air to escape as quickly as possible. The loss of heat  
or power in the compressing of air has also been reduced very much  
by recent inventions, so that nothing can be safer in a mine than  
compressed air. Where power has to be applied at long distances  
underground it is now admitted that nothing can be better in every  
way than the compressed air, and under such circumstances it is at  
least fully as economical as steam, which it would be most danger-  
ous to have at any distance from the bottom of the shaft.

It has also been found most advantageous where water has to be  
cleared from the dip workings from almost any distance. At several  
places it has given the greatest satisfaction in ventilating the drifts  
that are driven under ground as they progress, doing away with the  
expense of putting up brattice to take the air to the face, and the  
pipe conveying it could be continued, so that there would always be  
plenty of air close to the point where the men were working. There  
is another useful purpose to which it could be applied that would  
give increased safety to the miners—that is, by sending it into the  
goaves for the purpose of clearing them of gas, with which, in many  
mines, they are charged, and often to a very dangerous extent, en-  
dangering the safety of the men engaged at no great distance off at  
the working faces. Where coal-cutting machines are in use, com-  
pressed air is the only motive power that has been found suitable for  
them, and where such is the case the faces and working places can  
be kept admirably cool for the men, and so adding to the ventila-  
tion of the mine. For endless rope haulage, too, compressed air is in  
every way well adapted. In connection with it there is an excellent  
contrivance at some places for attaching the tubs to the ropes, es-  
pecially where the gradients are heavy. This is effected by means  
of a simple clamp, so easily arranged that a boy can either hang on  
or loose off, as it is termed, whenever such is necessary. It attaches  
the tubs as firmly to the rope as when the various screw clamps are  
employed, the strain coming upon the draw-bar, and not on the top  
of the tubs, so that there is no liability to up-end or damage the tub  
in any way, whilst any gradient can be met. There is no liability of  
the clamp to slip, and it can be easily constructed and repaired by  
an ordinary mining blacksmith. The invention is a very simple, but  
at the same time, a most efficient one in connection with under-  
ground haulage. Such, however, are some of the uses to which com-  
pressed air can be advantageously and economically applied under-  
ground, and as a conveyor of power, and even from a sanitary point  
of view, it should commend itself to mineowners generally.

### RAILWAY RATES FOR MINERALS, &c.

Several of the leading railway companies, including the Midland,  
London and North-Western, and Great Western have given notice  
that in the next session of Parliament they intend to apply for power  
to consolidate, revise, and alter the existing tolls for minerals and  
merchandise, and also to alter the existing classification of minerals  
and goods. This announcement has already had the effect of aroun-  
g the attention of the mineowners in all parts of the kingdom, so  
that there is every probability of a Parliamentary struggle of no  
ordinary character; for it is felt that the railway companies, look-  
ing after their own interests, will give little consideration to those  
of their best customers, who are the mineral owners. A combination  
is consequently taking place for the purpose of watching the Bills  
that will be presented by the companies, and of opposing them as  
well, for there is no doubt as to their purport. The existing anoma-  
lies in the rates are intolerable, and require immediate rectifica-  
tion in the interest of the public, and most certainly should not be  
exaggerated or consolidated by Parliamentary sanction. If we take  
the carriage of coal, it will be found that the charges from different  
districts vary a great deal, and are not based upon any fair or intel-  
ligible principle. From Derbyshire and Nottinghamshire the rate  
for a ton of coal to the Metropolis is 5s. 9d., the average distance  
being 142 miles, or 0.48d. per ton per mile; whilst from South York-  
shire to London (172 miles) the charge is 7s. 2d., or 0.50d. per ton  
per mile. Here the charge is the heaviest for the longer distance.  
From Lancashire and Cheshire to London, the average distance  
being 194 miles, the rate for coal is 7s. 1d. per ton, or 0.43d. per ton  
per mile; whilst from North Wales, the same distance, the charge is  
7s. 4d. per ton, or 0.44d. per ton per mile. The rate for ironstone  
and other ore is made in the same zig-zag manner, even by the same  
company.

It is the same with respect to the manufactured material. The  
charge for steel rails from Sheffield to Hull, 534 miles, is 7s. 6d. per  
ton, or 1.7d. per mile; and to Goole, 334 miles, it is also 7s. 6d. per  
ton, or 2.24d. per mile. Wire is carried at a less price from Antwerp  
to London than it is from Birmingham to London, and the same is  
the case with respect to ordinary goods, and even food supplies.  
Hops are carried from Boulogne to London at 17s. 6d. per ton, whilst  
from Ashford, in Kent, scarcely half the distance, the rate was over  
52s. per ton. The preference given to the foreign producer against  
the home producer is one of those anomalies that cannot be ac-  
counted for, seeing that the more money that is earned by our own  
population so much the better for the railway companies. The  
foreign workmen do not use our railways, whilst those at home do,  
and as a rule to the full extent of their means. The Railway Com-  
mission which was established in 1873 has done much in the interest  
of the public and traders at home, although its powers are con-  
sidered by many to be too limited, whilst Mr. SAMUELSON'S Select  
Committee, appointed in 1881, and which sat for a considerable por-  
tion of two sessions, was instrumental in showing the extraordinary  
anomalies which existed in the carriage rates and in the terminal  
charges as well. Great difficulty has also been experienced in ob-  
taining from the companies the charges they are legally entitled to  
make, and few have ventured to engage in litigation against such  
powerful corporations. But now it appears that mineowners, manu-  
facturers, and traders generally find that they must act together to  
prevent the railway companies from taking an unfair advantage of  
them by the powers they are about to ask Parliament to grant them.  
The former would also do well were they to endeavour to obtain a  
more uniform and intelligible system of levying rates and tolls by  
the railway companies than is the case at the present time.



SCOTCH PIG-IRON WARRANT MARKET.

Mr. W. WILSON (Glasgow, Nov. 20) writes:—The warrant market has not yet recovered from the excitement of last week. There is only a small business doing, and it will probably be some time before the price responds to only legitimate influences. The gloom prevailing of November hangs specially thick at present over business circles generally. Shipments for the week are small, and do not compare favourably. A furnace has been put out at Langloan, making the number blowing 95. 190 tons were taken out of store here last week, while 280 tons were taken out at Middlesborough.

	Thursday, Nov. 13.	Friday, Nov. 14.	Monday, Nov. 17.
Price of Scotch Warrants, Nov. 17...	43/4, 43/2, 43/4	43/4, 43/2	43/4, 43/2, 43/4
Furnaces in blast in Scotland do...	95	101	114
Iron in store at this date	579,888	586,650	616,749
Shipments of Scotch pig-iron for the week ending Nov. 15	6,678	12,107	11,316
Do. since beginning of year	485,593	573,470	571,324
Price of Middlesbro', No. 3, Nov. 17	36/3	37/1 1/2	44/
Furnaces in blast Middlesbro' dist.	93	118	121
Middlesbro' Iron Imported at Grangemouth, week ending Nov. 15	7,650	5,449	639
Do. do. since beginning of year	236,823	241,384	211,872

REPORT FROM CORNWALL.

Nov. 20.—The steady improvement in the state of the tin market caused an official rise in the standards to be looked for early in the week, and that by no means without fair ground. Putting up the standards, however, is always a slow operation, and one not to be undertaken without due deliberation, and whatever changes may be impending at the present moment we can hardly anticipate an approach to a state of stable equilibrium until the political crisis is definitely settled, and that will take a few days longer. With the political atmosphere cleared some substantial revival may be fairly looked for.

The unlucky accident at Wheal Agar, though capable of repair in a few days, has been made use of to the detriment of the more easily scared among the shareholders. Of course, the mine was none the worse for the breakage of the engine-bob, but that was of little consequence in the eyes of the operators. Shaky adventurers never stop to think, and the market is easily run down to the advantage of the spirited speculator. The moral of these breakages at Wheal Agar appears to be that the mine wants a new engine. Indeed, it is said that more has been already spent in patching than would give the concern its new fit out.

A very interesting archaeological discovery in connection with ancient mining in Devon has been brought under the notice of the Geological Society. Mr. D. Pidgeon, F.G.S., reported the discovery in connection with the submerged forest of Torbay, resting on the breccia underlying the clay in which the forest grew, of two aggregations of trap pebbles, which had probably served as smelting-hearth. In their neighbourhood an ingot of copper, a fragment of a second, some tin slag, a piece of glass, flint implements, and other articles were found, together with remains of piles driven into the ground. These traces of human work apparently belonged to the bronze age. In Goodington Bay, near by, pewter vessels, apparently of Roman date, were found by his son in a bed 10 ft. below high tide mark, or at a lower level than that of the bronze age relics. The discovery is a very interesting one, but the conclusions drawn from it by Mr. Pidgeon hardly seem warranted. The submerged forests which are found at intervals all along the coast of Devon and Cornwall (and indeed over a very much wider area) are commonly believed to indicate a subsidence of at least 40 ft. Mr. Pidgeon thinks the occurrence of these smelting hearths shows the contrary, and suggests that it is more probable the clay bed was deposited in a shallow mere or marsh of land water kept back by the sea beach, which was then some hundreds of feet further to seaward, and that the forest, which consisted chiefly of willows, grew on the marsh— which, by the way, is no new theory. It is impossible, however, to believe even an ancient Briton was so unwise as to conduct smelting operations in a marsh below high water mark, while if Mr. Pidgeon had consulted the geological records of Cornwall he would have found that there is indisputable evidence of the conduct of mining operations at a time when the general coast line was much higher than it is now in the remains of the ancient stream works at Garnon and Pentnan. Of course, this gives the bronze age a greater antiquity, but that is after all a question of evidence, and not to be assumed *a priori*. Moreover, Mr. Pidgeon seems also to have overlooked the proofs deduced by Mr. Godwin-Austen from the submerged forest in Barnstaple Bay, that since the forest era there has been more than one period of elevation as well as depression. Highly interesting archaeological discovery of these ancient "smelting-works" as now set forth is therefore valueless as a chronological factor.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

Nov. 20.—The collieries in Derbyshire and the adjoining county of Nottingham are now working better all round than for a considerable time past, but prices have not as yet come up to the point that might be expected for November. But the open weather has, of course, told upon the house coal trade, more especially with the Metropolitan. Still a fair tonnage has recently gone to London from the leading collieries, including Clay Cross, Eckington, Blackwell, and Grassmoor. The rates at the pit differ of course, but good Silkestones can be purchased at 9s. per ton, and other kinds at from 7s. to 8s. Still the selling prices to the metropolitan consumers appear to be much higher than the pit rates would warrant. It does not look reasonable that coal which is purchased at the pits at from 7s. to 8s. per ton should be charged 22s. to the consumer on reaching London, seeing that the carriage and other charges should not amount to more than from 8s. to 2s. the ton all told. Steam coal has gone off somewhat moderately of late, there being no output for it, no seaport within anything like an easy distance direct by railway. The Manchester and Sheffield Company, however, purpose making a line from Kiverton Park, no great distance from Sheffield, to Chesterfield, which would be of the greatest possible advantage to the colliery owners in the latter. It would give them access direct to Hull, from which there are heavy exports of steam coal to nearly all parts of Europe. In gas coal a large tonnage is being sent away to the south and west, several of the owners having contracts for the year.

In other kinds of coal there has not been any material change. Smithy and small for engine purposes does not go off so well, but a proposed line by the Midland will open up the Lancashire manufacturing districts to the colliery owners of a large part of Derbyshire. The ironworks in the latter county, it may be said, have been fairly off for business, so far, which is saying a good deal, for this is usually a slack part of the year as regards certain specialities which are extensively turned out in the summer. The make of pig has kept up well; and, whilst no decline has taken place in the demand from a distance, the local consumption has been well maintained. The large foundries have also had a comparatively good time of it for the period of the year, especially in heavy castings, whilst in those of a light and ornamental character the demand has been the reverse of brisk for a considerable time past. In rolled iron more activity has prevailed of late, and this is likely to continue to be the case. Makers of malleable iron castings have done a steady business of late, more particularly in small material of an ornamental kind. Several of the light branches of trade in Sheffield now show to greater advantage than for months past, so that at many of the largest establishments full time is the rule. Rather more is being done in Bessemer steel for springs and some kinds of railway forgings, as well as for certain descriptions of cutlery and tools. Crucible steel has undergone but little change, there being still a fair demand for special qualities, as well as for the ordinary kinds suitable for wheels and other kinds of castings. The quietness which has so long prevailed in our shipyards has told upon the manufacture of plates, the demand for which has continued quiet, but there is every reason to believe that the New Year will see a change for the better, there is no doubt that several private yards will be entrusted

with Government orders, which will be on an extensive scale, requiring large quantities of both iron and steel plates. The latter, indeed, are likely to be in the ascendant, for they are admittedly the best as well as the most economical and power resisting. Hoop iron has gone off well for some time past, a good deal being for the Indian and other foreign markets. In cutlery, the improvement since the last quarter of the year set in has been most decided; and not only is full work more general, but many more hands are employed; and this is not the case only as regards the finest descriptions of table, pocket, and pen knives, but in the inferior qualities as well. In edge tools not much change has taken place, and the men are not so well employed as could be desired, and the same may be said with respect to heavy tools, such as are required by engineers and mechanics. In sheep-shears, work goes steadily along, good orders being in hand for exportation. Light machines, such as lawn-mowers, have not begun to move much, but it is expected that makers will begin active operations at the commencement of the New Year. The prospects of skate-makers, so far, do not look very promising, and some of them are well supplied with stocks.

The dispute at the Barrow Colliery, near Barnsley, continues, and neither side appears to be particularly desirous of bringing it to a close. The men have had fair terms offered to them, but many of them prefer to remain out, and live on what is obtained by subscriptions from the miners at work and the outside public. The men belonging to the Association are maintained, but those who do not have to depend upon the subscriptions, which lately have realised between 60s. and 70s. a week.

REPORT FROM LANCASHIRE.

Nov. 20.—With a continued absence of anything like winter weather to help up the demand for the better qualities of round coal for house-fire purposes, and with only very moderate trade requirements for the lower qualities for ironmaking and steam purposes, there is still a very dull tone throughout the coal trade of this district. In some cases pits are getting back on four days a-week, and where they are working five the output is in most cases in excess of requirements. Although there is no large weight of coal going into stock on the pit banks considerable quantities accumulate under load on the pit sidings, and to liberate wagons very low figures are frequently taken. In best coals there has here and there been a little giving way on the full prices, and generally there is a want of firmness in the market which seems likely to continue until a change in the weather brings forward an increased demand. At the pit's mouth best Wigan Arley averages 9s. to 9s. 6d.; seconds, 7s. 6d. to 8s.; ordinary Pemberton Four-feet, 7s. to 7s. 6d.; common house coal, 6s. to 6s. 6d.; steam and forge coal, 5s. 6d. to 6s.; burgy, 4s. 6d. to 5s.; good slack, 3s. 9d. to 4s.; and common, 2s. 6d. per ton upwards.

Shipping has been quiet during the past week, and steam coal has been offering at low figures at the ports on the Mersey, 7s. to 7s. 6d. per ton being about the average prices for delivery at the High Level, Liverpool, or the Garston Docks.

The agitation for an advance of wages in West Lancashire seems now to have altogether subsided, and the more sensible course of arranging a sliding-scale for the regulation of wages in future has been adopted.

It has been decided that a portion of the balance of the Hartley Colliery Relief Fund, amounting to about 2750*l.*, shall form a fund from which grants shall be made in the case of fatal accidents occurring at mines in the North-East Lancashire district, where there is not at present any permanent relief fund such as exists in West Lancashire. These grants will amount to 5*l.* in the case of fatal accidents to persons over 16, and 2*l.* 10s. under 16 years of age. They will come into operation after January 1 next, and will supplement the relief obtained from the respective colliery funds.

The condition of the Iron Trade remains comparatively unchanged, and buyers continue indifferent. Where concessions upon current rates are obtainable there is a disposition to give out orders, but it is only at low prices that business of any weight can be done either in pig or finished iron. At a little under full rates moderate sales of Lancashire pig-iron are reported, the basis of transactions being about 4*l.* to 4*l.* 6d., less 2*l.* for forge and foundry qualities, delivered equal to Manchester, and district brands are to be got at about the same figure, although some makers quote 1*l.* to 1*l.* 6d. per ton more.

Hematites continue in poor demand, and low in price. Manufactured ironmakers generally are kept well employed with work in hand, but there is only a slow business doing in the market, and prices average 5*l.* 10s. for common to 5*l.* 12s. 6d. for the better qualities of bars, 6*l.* to 6*l.* 2s. 6d. for hoops, and 7*l.* to 7*l.* 2s. 6d. for common sheets delivered into the Manchester district.

Founders report trade extremely quiet, with excessively low prices quoted for all description of castings, pipes being as low as 4*l.* 7s. 6d. to 4*l.* 10s. delivered here.

Locomotive and railway carriage builders continue busy, and one of the local firms has just secured an order for 15 locomotives for India. Builders of heavy mill engines have also a good deal of work in hand for India, and also for this district. Tool makers are kept moderately employed, but in the engineering trades generally there is still a falling off in the weight of work coming forward.

TRADE OF THE TYNE AND WEAR.

Nov. 20.—There is little change to notice in the state of the Coal and Coke Trades here this week, the weather on the coast has been more moderate, and shipments have therefore increased as compared with the previous week. Steam coal of the best kinds continues in a good position, the works being well employed, but second and third rate works are moderately so. In Durham the gas coalworks are fully employed, and there is a good demand for household coal, and also for bunker coal, nuts, &c. The coal and coke shipments at Tyne Dock for the week were 114,397 tons—a fair average shipment. There is no change in the value of any kind of coal or coke, the price of coal at the pit's mouth continues low, and only small profits can be earned at the best works. The question of mine rents continues to attract much attention, and the opinion appears to be held generally by colliery agents and lessees of mines that these royalty rents are too high for the present times. Another point in connection with this question has been raised—that is, local taxation. It appears to have escaped notice hitherto that these mine rents have not been subject to local taxes, and this causes the burden of taxation to press more heavily on the mineowner. To remedy this defect it will probably be necessary to resort to legislation, but the royalty owners ought voluntarily to make some concession as to the rents they receive; if they do so it would not only relieve the lessees of mines but also doubtless ultimately benefit the royalty owners themselves.

The new institution to be founded in this district is to be called the North-East Coast Institution of Engineers and Shipbuilders, and a general business meeting will be held in the Lecture Hall of the Literary and Philosophical Society, Newcastle, on Thursday. Up to the present there is a total membership of 400. The officers and council now being voted for by ballot among the members will be declared at the above meeting, and the constitution will be discussed. The formation of this new society is now assured, 400 members make a very encouraging start, and there is a large field to occupy the attention of the members in connection with building iron ships and the construction of marine engines and other machines of various kinds in connection therewith. There will be no opposition to the old Institution of Mining and Mechanical Engineers, but the Transactions will, no doubt, deal with questions which have occupied the attempts of the members of the older society occasionally. Some of the leading members of the new society are distinguished members of the old. The old society will no doubt continue to occupy a leading position as the first and most important institution of the kind in this country.

The coal winning at Marsden, near South Shields, has progressed so far that 600 tons of coal per day is now raised from one of the seams, but it has been found that the lower seams have been cut off or much disturbed by the occurrence of faults, also that the seam dips very considerably to the east—that is, in the direction of the North

Sea. The total depth sunk and bored here is about 330 fms., but if the lower seams had not been disturbed by faults they ought to have been found before.

The Pig-iron Trade has changed little during the past week, but on the whole there is a firmer feeling. The shipments continue extremely good for the time of year; the market is, therefore, well sustained, and makers have more confidence. Some good sales have been made lately at an advance of from 3d. to 6d. per ton. There is certainly a better feeling at present respecting next year's trade. The wages question is expected to be settled next week by the arbitrator, and that will probably improve the manufactured iron trade. There is no change of consequence in the value of any kind of finished iron. There is more work in some departments of the steel trade and engineers, founders, bridge builders, &c., continue on the whole well employed. The shipments of pig-iron for the week were 25,313 tons, about 11,000 tons of this being for Scotland. The delivery is a very large one.

The Shipping Trade and commerce generally continues to improve, but the progress is slow. Freight rates have improved in some trades, but they are still, on the whole, comparatively very low. Taking the rate of freights three years ago, and the present rates, the fall has been enormous, in some cases 30 per cent., it is considered, however, that the worst was reached in the middle of the present year, and many laid up vessels have been put to work since that time. The expenses of working steamers have been cut down in every possible way, but it is still difficult to work them at a profit. This is managed with some vessels, but others are only worked at a slight loss.

The Shipbuilding Trade has improved a little, but no rush of capital into the trade can be expected for some time. The enormous addition to the merchant navy during the past five years, amounting to about 700,000 tons, or 140,000 tons annually, has for the time quite overdone the trade, but as less vessels are now being built, and the number lost is in excess of the number built, a gradual and progressive improvement may be looked for.

Messrs. Palmer and Co., at the Jarrow Ironworks, have received orders for two marine engines of the new triple pattern, and also for several other vessels of various kinds. Messrs. Leslie and Co., of Hebburn, have also received an order for a vessel of large dimensions.

There is some improvement in the Engineering Trade at Sunderland, where the depression has been most severely felt, and at the North-Eastern Marine Engine works the men have been put on full time.

There is great activity at the Elswick Works of Sir William Armstrong and Co., and the new steelworks there will soon be in active operation. A number of new vessels will also be laid down shortly at the new shipyard there.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Nov. 20.—A steady but not brisk enquiry exists for native pig-iron, and on 'Change this week makers spoke of a probable good trade, as times go, up till the end of the year. Prices, however, are unremunerative. All-mines are 80s. for cold blast, and 60s. for hot. Part-mines are 45s. to 50s., and common iron 37s. 6d. to 40s. Since the Quarterly Meetings the selling prices of these last two descriptions have declined between 1s. to 1s. 6d. per ton. Foreign pig prices are unchanged. Makers of finished iron are unable to report improvement. They manage, however, to find the ironworkers pretty regular work. Rates favour buyers in nearly every branch. Best bars are 7s. 10s., and common, 6*l.* to 5*l.* 12s. 6d. Plates are 7*l.* for ordinary tank sorts, to 8*l.* 10s. and 9*l.* for boiler qualities. The native coal trade is improving, as contracts entered into with outside districts during the strike are gradually becoming worked off. Forge coal is 6s. to 7s., rough slack, 3s. 6d. to 4s. 6d.; common furnace, 8s., and best, 10s. per ton.

To-day appeals against a proposal by the arbitrators under the Mines Drainage Acts, to make a draft award for the Old Hill district, were heard in Wolverhampton by the arbitrators. The mines drainage rate to be levied is 3d. per ton on fire-clay and limestone, and 6d. per ton on coal, ironstone, slack, and other minerals.

Mr. J. B. Cochrane has been appointed a member of the board of examination for mine managers' certificates for the mining district of South Staffordshire and East Worcestershire, *vice* Mr. Barker, resigned. Mr. Fairley has been re-appointed examiner in chemistry and ventilation, and Mr. Jonah Davis, C.E., in mechanical engineering. Mr. D. Peacock will still be examiner in mining and practical ventilation. An examination is to come off in January.

The Central Committee of the Midland Counties Association of Miners are trying to create a fresh rupture between the colliers and their employers. They have determined to hold a conference of representatives from each pit on Dec. 1, "to consider the advisability of giving notice for a rise in wages."

The first meeting of the creditors of William A. Ritson, of Tamworth, trading as the Tamworth Colliery Company, was held in Birmingham on Monday. The liabilities were shown to be 7938*l.*, and the assets were estimated to produce 8025*l.*. As no composition offer was made a trustee in bankruptcy was appointed.

THE FATAL BOILER EXPLOSION AT A STEELWORKS.—Yesterday the adjourned inquest was held on the bodies of the three men who were recently killed by the explosion of three boilers at the New Basic Steelworks, at Bilston, of the Staffordshire Steel Company. Mr. E. B. Martin, chief engineer to the Midland Boiler Inspection Company, who had examined the boilers on behalf of the Crown, deposed that the cause of the explosion was the softening of the plates by overheating through shortness of water. The boilers had been overworked to get steam. The enquiry was further adjourned.

REPORT FROM NORTH WALES, SALOP, AND CARDIGAN.

Nov. 20.—I referred last week to one defunct Welsh mining industry; I will just refer to another, that of gold mining. On referring to really valuable and important papers read at the meeting of the British Association at Manchester in 1861, and at Cambridge in 1862, I find that at the latter date there were no less than 37 mines worked for gold, and that assays of ore from these gave results from a few dwts. to 200 ozs. to the ton of ore. Assays of 10 to 50 ozs. to the ton were very numerous. As the result of this the amount of machinery of all kinds which were carried by road from Ruabon into Merionethshire was enormous, and even at present we may see massive castings lying on the hill sides cushioned deep in moss and fern. To-day there is not I think a single gold mine worked in the whole district. Can anyone explain how this has come to pass—were the ores tested native or imported, and were really wise men duped? Or has the bulk of the ore-stuffs of the veins not yielded gold as the selected samples did? Or were the undertakings swamped by plunder and drones? Or what other reason can be assigned for the failure of the industry? That there really was a great deal of gold there is certain. One find at the Clogau Mine alone yielding no less than 38,000*l.* sterling. Is there any hope of the revival of gold mining in Merionethshire?

At the adjourned inquest held at the Miners' Arms, Minera, on Friday, touching the death of John Edwards, who was killed in the Vron Colliery by a fall of roof, the Government Inspector and the jury acquitted the company (which is in liquidation) of all blame. The coroner expressed his regret that he had at the first meeting given expression to rumours which reflected injuriously on the management of the colliery, and which were shown by the evidence to be unfounded. Would it not be best for coroners generally not to give expression to such rumours at the commencement of an inquest?

Among the railway projects for which Bills are to be presented to Parliament is one for extending the Glynceiriog Tramway up the valley to Tregeiriog, and downwards to the Black Park Collieries' siding on the Shropshire Union Canal, and also for power to work the line by steam. With such ample water power at command would not this little line be an admirable one to be worked by electricity? The Great Western Company also seek extension of time for the construction of a branch from their Bala and Festiniog Railway to Maentwrog. This construction of this branch will take this railway an important stage nearer Fortmadoc and the sea. A



narrow gauge line is also contemplated from Corwen along the Holyhead-road to Bettws-y-coed. In the first great railway fever of 1842 there was a great scheme for constructing a full-gauged railway along this route to Bangor, and so to Holyhead. This was at the time superseded by the Chester and Holyhead line. The district referred to is among the prettiest in North Wales, and there is no doubt that for this reason as well as on account of the ordinary population of the district a narrow gauge line would pay.

The Salford Town Council has joined that of Manchester as joint promoters of the Ship Canal project. The collieries, principal slate quarries, iron, and other leading industries of the district, excepting, of course, those of lead and copper mining, are in full work. The Caerwre Ironworks Company held their annual meeting last week, at which a very satisfactory report was adopted, and it was resolved that the unissued shares be distributed only among the present shareholders. The sum of £3,000, which is required to abolish the River Dee tolls at Chester, has, within a trifle, been subscribed. Of this sum the Duke of Westminster has contributed one-third and the county authorities one-half. The gasworks at Ellesmere, which hitherto have belonged to private persons, are being purchased by the town authorities, which leads to the enquiry—ought not all gasworks be worked (like the public-houses in Sweden) by the town authorities for the benefit of the ratepayers?

#### TRADE IN SOUTH WALES.

Nov. 20.—The Steam Coal Trade improved last week to some extent, but business even now is not so active as is desirable. Some of the collieries are working short time, a fact which tells its own tale. The amount sent away from Cardiff last week was 134,241 tons foreign, and about 20,000 coastwise, with 7813 tons patent fuel; Newport, 36,077 tons foreign, and 24,352 coastwise; Swansea, 16,962 tons foreign, and about 14,000 coastwise, with 4090 tons patent fuel. The house coal trade is not so busy as is generally the case at this time of the year, notwithstanding the cold weather prices, however, remain firm.

Last month the Midland Railway took 1500 tons of coal from Aberdare to London, and the Great Northern about 2000 tons. The London and North-Western took 4000 tons from Aberdare, 1200 from Cwm-dare, and 900 from Fforchaman. The Great Western, however, as usual, took the largest quantity, Aberdare supplying 5800 tons to that line; Nixon's Navigation, 5300; Fforchaman, 4400; Cwm-dare, 3500; Bwlfa, 3300; Merthyr-Aberdare, 2900; Mountain Ash, 6500.

The Dowlais Company are about to erect a new ladle at the Lower Works, at a cost of 5000l., and the steelworks are to be enlarged at a cost of 50,000l.

The Ebbw Vale Steelworks are reported to have received a large order from the London and North-Western Railway Company: 16 puddling furnaces at the Upper Cyfarthfa Works are to be stopped, it is hoped only temporarily.

There are many enquiries being made at the South Wales Iron and Steel Works, but they do not lead to business. Only 1083 tons of iron were sent away from Cardiff last week, and one parcel from Newport of 709 tons. The arrivals of iron ore at Newport have been large, 10,131 tons having been received from Bilbao and 8200 from other sources; Cardiff landed 3000 tons from Bilbao and 769 from other places.

The condition of the Tin-plate Trade is not reassuring. Even 14s. per box does not seem to attract many customers, as the large output is likely to further bring down prices.

#### ELECTRIC LIGHTING, AND LEGISLATIVE RESTRICTIONS.

Although nothing that has been invented or discovered within the last 10 years in connection with illumination by electricity has afforded the slightest evidence that, except in those isolated cases where a large space has to be illuminated, electric lighting is either economic or effective, the light still attracts attention. The wretched blaze-and-shadow illumination now perpetrated by the use of electricity on Blackfriars Bridge, as compared with even the imperfect gas illumination which it replaced, is sufficient to condemn the system with all impartial minds, and the comparative success of the now defunct Jablochhoff system used on Waterloo Bridge was only secured at great cost and by the liberal use of gas-lamps as an auxiliary, and to hide the defects of the electric lamps. An effort, however, has been made to create the impression that the failure of electric lighting for general purposes is attributed, not to the immutable natural laws which determine the diffusion of light, but to the legislative restrictions which were very properly imposed upon the schemes which threatened some two years since to flood the country. It is essential that the public should be protected against local authorities conceding their rights to the inventors of any of the crude notions which have thus far been brought forward, and subjecting the ratepayers to an increased poundage for extra expenditure in keeping the public ways in as good a condition as at present, for it is well known that although, as in the case of gas and water mains, the companies have to restore the ways to the condition in which they found them, each disturbance does permanent injury, the cost of which falls upon the ratepayers. Upon these considerations it will be evident that the public should lose no time in procuring the necessary rebutting evidence for submitting to the Board of Trade, should it be asked for, as the result of the deputation of representatives of the electric lighting interests who had an interview with Mr. Chamberlain on Thursday.

The illuminators had certainly a great advantage in the deputation being introduced by one of themselves—Lord Thurlow, the Chairman of the Anglo-American Brush Electric Light Corporation—who, after a few brief remarks, handed to the President of the Board of Trade a statement of the main points on which the company sought an amendment of the Act. They were—1. That the rights given to local authorities to purchase compulsorily electric lighting undertakings within their districts upon the terms set forth in section 27 of the Electric Lighting Act were such as to prohibit any supply of the electric light to the public, and such clause should be repealed. (This clause gives local authorities the power to purchase compulsorily the enterprise, at the then valuation, at the end of 21 years.)—2. In the Provisional Orders granted by the Board of Trade under the Act the provisions as to the compulsory laying down of mains should be omitted, and the undertakers should have the full power to decide as to the position and extent of the mains to be laid down by them, and the right to compel the undertakers to supply them with the electric light should be confined to consumers willing to take a minimum quantity per annum.—3. The undertakers should be permitted to supply otherwise than by meter, and in such cases the purposes to which electricity is applied by the consumers should be matter for agreement between them and the undertakers.

The views of the deputation as to the non-working of the Act were explained in detail by Sir Frederick Bramwell; but it is questionable whether he would be disposed to stake his professional reputation upon the accuracy of the statements which he made. He declared that the electric light required only to be tested to be appreciated, and it ought to be placed within the reach of all. It ought to be adopted on sanitary grounds—the diminution of the heat, the non-ventilation of air—and on the grounds of the preservation of pictures and books, and the non-dirtying of walls and ceilings. During the last 50 years the material progress of the world was owing to the application of science to industry, and he did not know a more meritorious application of science than this for electric lighting. If the restrictions in the Act were removed it would give employment to many artisans who sadly needed work at present. Then another important thing was the care of our coal supply. The coal burnt in a steam-engine to work a dynamo for the production of light by electricity would give the same amount of light with one-third or one-fourth the expenditure of coal that would be needed to produce the ordinary illuminant gas, when used with glow lamps. When used with arc lamps the same light would be obtained for 1-20th the quantity of coal consumed for the gas illuminant; and when it was remembered that there was 1 ton of coal used in the Metropolis per head of the population per annum, the matter became very serious. There were 2,141,600 tons of coal burnt in

the making of gas in the Metropolis last year. Up to 1882 many persons had hoped that there would be a very rapid development of this mode of supplying light, but the provisions of the 27th clause of the Act, compelling the undertakers to sell on onerous terms at the end of 21 years, had defeated the objects of those who wished to see the use of the electric light spread. There was practically no provision in England for the distribution of light to the private consumer from the principal source of supply. The 27th section said that in 21 years, or a less period specified, the local authority should have the option of compulsory purchase of the undertaking, and they were not to pay anything "in respect of compulsory purchase or goodwill, or of any profits which may be or might have been made from the undertaking, or of any similar considerations;" but they were to pay "the then value of all lands, buildings, works, materials, and plant of such undertakers suitable to and used by them for the purposes of their undertaking within such jurisdiction, such value to be, in case of difference, determined by arbitration." The earlier part of the 21 years must be passed in strenuous efforts to get the electric light taken up, and it would be impossible to get persons to subscribe if the local authority were to have the power of buying up the works without giving any compensation for the loss sustained in those earlier years. People would not embark money on such terms, and it appeared to him that the 27th clause absolutely prohibited any capital being invested in electric lighting. It was very desirable that there should be competition with the gas companies, and he, therefore, urged that the 27th clause should be repealed.

The absurdity of such a proposition appears to have been evident, even to Lord Thurlow; for, upon Mr. Chamberlain remarking that he had been in correspondence with the companies, and that some of them merely asked for a modification of the clause, his lordship did not hesitate to admit, even at the cost of convulsing the assembly with laughter, that there had been a meeting of the companies on the previous day, at which they had decided to ask for the total repeal of the clause in the hope of getting a modification. That such an admission rather startled Sir Frederick Bramwell there can be no doubt, and yet it can scarcely be supposed that he was in earnest when he declared that it was in common justice that he had asked for a total repeal of the clause, in order that electric lighting should not be more heavily weighted than gas. An example of stating the truth, but not the whole truth, was given by Mr. James Staats Forbes, the Chairman of the Edison and Swan Companies, when he remarked that those two companies had spent 380,000l. in one way or another, and there was not only no return, but there was not the remotest possible prospect of a return. He did not know what the Edison shares were worth, but the Swan shares, upon which 3l. had been paid, and on which 2l. remained to be paid, he thought they could buy and get something for taking them. They did not intend to go on under that Act of Parliament, and they must at present give up all idea of public lighting. If Mr. Chamberlain wanted to kill electric lighting as applied to general lighting, then he would maintain the clause referred to. Now Mr. Forbes should have explained, in order to be strictly accurate, that it is less the (to him) hateful clause that has made it necessary to pay in certain instances to get rid of liability on electric companies shares, than the exorbitant amount which the promoters and vendors have charged the public for inventions and promotion services which commercially speaking are worthless.

The value and importance of electric illumination was not ignored by the President of the Board of Trade, but he evidently is fully alive to the fact that all that has been claimed for it has not been substantiated. He declared that he was as anxious as the deputation for the development of this very important enterprise. He recognised the truth of all that Sir Frederick Bramwell had said on that part of the question, and if there was anything in the legislation of the past two years which unduly and unnecessarily interfered with the enterprise, he should be most happy to consider with them how that legislation was to be amended. He understood their view, put rather strongly before him, to be that the small progress which had been made was entirely due to that legislation. He did not want to enter upon contentious subjects, or he could argue that point a little. He should say that in a great measure the failure to proceed more rapidly was owing to the great haste on the part of companies which had been more or less financial speculations. A few years ago those companies came to Parliament and proposed practically to parcel out the whole of the kingdom among them at a time, according to the statements just made, when they knew so little of the matter that they did not know the best form for giving the supply; that they did not know the best form of dynamo; that what they purchased for 2000l. turned out a few months afterwards to be only worth 200l.; and generally the whole matter was in an empirical condition, which could not form the basis for really sound commercial enterprise. Under such circumstances it seemed to him that it was the duty of Parliament to prevent the appropriation of all the avenues to this great business by companies and individuals who were not really prepared to deal with it in a practical way. A committee of the House of Commons was appointed for the purpose of considering the whole matter. He thought the committee would be generally admitted to have been a very able and impartial committee, upon which all interests and a great deal of the existing knowledge were thoroughly represented. Mr. Stanhope was the Chairman of that committee, which came practically to a unanimous conclusion, and the Act now complained of was the result of its deliberations. What was the intention of the committee in proposing the Bill which was subsequently somewhat amended in the House of Lords, on the motion of Sir F. Bramwell and other gentlemen interested in the matter? The Bill as it left the Commons gave only 15 years before the right of purchase arose, but in the House of Lords 21 years was substituted for the 15. The committee's intention undoubtedly was to prevent the creation of those vast monopolies which, in the case of gas and water, had sprung up, and which were believed by, at any rate, the majority of the people to be on the whole inconsistent with the true advantage of the community. At the same time, the object was not unnecessarily to interfere with the progress of this industry.

The President was evidently not to be misled by any of the fallacious arguments placed before him. He remarked that Sir Frederick Bramwell had said that it was very hard that this business, which came into competition with gas, should be subject to limitations which were not applied in the case of gas. But he omitted altogether to state that gas was under considerable limitations. In the case of gas there was no attempt made to prevent a monopoly, but there was an attempt made to limit the monopoly in the interest of the community by having limitations of dividends, which experience had shown did not work very well, but the object was the same in the case of gas as in the case of electricity, although it was sought to be obtained by different means. Several speakers had said there was no similar case of restrictions to those which appeared in the Electric Lighting Bill. That was also a mistake, because there was precisely the same restriction in the case of tramways. With the same view in the Tramways Act there was a clause which enabled the local authority to purchase at the expiry of 21 years. The object was exactly the same, even if the details of the method were somewhat different. He would admit at once that if they were to discuss the methods they were fairly open to reconsideration. He should say that in the 27th clause the object of the committee was that while the community should be enabled to resume this monopoly at any moment after the 21 years, it should do so on terms which would, at all events, fairly recoup the undertakers for all legitimate outlay. It might be that the terms of that clause did not carry out that object, and if the deputation were of that opinion, he could only say that, if they would draw up such a modification of the clause as in their opinion would satisfy those conditions, he would take care that it had the fullest consideration. But he was bound to say frankly that he could not give any support whatever to a plain proposal that the whole of that clause should be repealed. He did not think the local authorities of the country would assent to any proposition of that kind, and he could not think that Parliament, which had shown itself hostile to the creation of those great monopolies, would allow a new one in the case of electric lighting, unguarded by any such limitations as those which they had sought to impose. Some kind of

limitation they must take to be an absolute necessity, and the only question to consider was whether the limitation imposed was a limitation which unfairly restricted the progress of the industry, and which, therefore, might be properly altered as to its details. There were a number of minor matters which he admitted were subjects for further consideration, and upon which he should be very glad to receive any proposition or suggestions from the deputations.

As the necessity for the clause has already been exhaustively discussed, both in the House of Commons and in the House of Lords, and was actually modified in the latter chamber, and as nothing whatever has since been learned by experience which would be likely to alter the opinions then formed it would really scarcely seem necessary that the matter should be re-opened; yet Mr. Chamberlain showed every consideration for the deputation in very fully stating his own views on the subject. In the first place, he said, there was the question of compulsory supply to a district. Mr. Hammond said that the concession was not a monopoly. It was not a legal monopoly; but it was a practical monopoly, because there was no doubt that the Board of Trade would not grant an alternative concession, except upon proof that the existing concessionaires were not properly performing their duty, or that some great improvement had been made, and that they were not satisfactorily dealing with the matter. Therefore, it was a practical monopoly, and a practical monopoly must carry with it corresponding obligations. The obligations may be a little too stringent for the present condition of this invention. If so, he would be glad to know the exact measure in which they wanted them modified. But to say that they should give to a company what was practically the absolute control of a large district without any obligation at all, enabling them to shut out other competitors who might be willing to do more, and to do nothing themselves, was a proposition which must not be entertained. Some kind of obligation there must be, and the question was to what extent it must go. The second point was that where mains were laid down they were under a condition to supply compulsorily all consumers. But they omitted to say that it was only under certain circumstances. That was of some importance because the question had been brought before the Board as to whether it might not be desirable that supply should be given to certain quasi-public institutions, like clubs and institutions of that kind, where a very large quantity would be taken without a necessary obligation to supply private consumers. There was nothing in the Provisional Orders which would prevent an arrangement of that kind. Neither was there anything in the Act or Provisional Orders which would prevent the differential price in favour of large consumers. That differential price existed, no doubt, in the case of gas, and he saw nothing unjust in it—nothing to prevent a similar arrangement in the case of electric lighting. Upon that matter, therefore, if any practical proposition were placed before the Board they would be glad to facilitate the supply of electricity in peculiar cases without enforcing too stringent and too general an obligation. It was suggested that they ought to have the right of compulsory acquisition of land for works. That appeared to be a perfectly reasonable application, and one they would be glad to give effect to. As to the delay in granting Provisional Orders, he might point out that a license could be obtained at almost a single notice.

The circumstance that the license referred to runs for seven years only really does not affect the question, because, as Mr. Chamberlain explained, it would give them rights for the moment, and cover the period which would be taken up for a Provisional Order. The Provisional Order might subsequently be substituted for the license, and in the meantime their rights would be protected. If possible he would not allow any technical difficulty or any red tape to stand in the way of expediting those things if the deputation showed how they could be done. Then as to the question of constant supply, he thought that the obligations of the Act had been somewhat misunderstood. He did not understand that the obligation was absolute. If a constant supply was not given he understood that the undertakers would be liable to a fine, but it would be open to them to show reason why they had been unable to comply with the obligation to give a constant supply. In that case they would be released from the fine, or it would be purely nominal. He did not think there was anything there which constituted a practical danger or a risk that would seriously interfere with their proceedings. The last point was a point upon which he agreed with them entirely in principle, although nothing had been said as to the way to give it effect. He was quite willing to give greater power to the local authority. He did not like the difficulty now cast upon him, and he would like a modified form of home rule, so that the local authorities would be able to deal with each case in the manner they thought right for the interests of their locality. The practical conclusion of the whole matter was this—that while he could not give any hope that he would favour the repeal of the 27th clause, he would give the best consideration to the form of clause—he should like it drawn in the form of a clause—which they might send him, for either modifying that clause in the Act or the orders to which they objected. Whether the deputation will congratulate themselves upon the impression which they have made upon the President of the Board of Trade is exceedingly doubtful; but there is at least this satisfaction, so far as the public is concerned: the electric illuminators have laid their case fully and fairly open, and afforded ample demonstration that it is an excessively weak one, whilst the experience of the last two or three years will suffice to prove that as a substitute for gas for general illumination the electric light has little or nothing to recommend it, although for certain purposes (and amongst these the illumination of pit-heads at collieries, of ironworks, metalliferous mines, railway goods yards, large workshops, and many other places might be mentioned) it would be economic and invaluable. The field for the successful introduction of the electric light is so large that it is really to be regretted that such laborious efforts to secure its adoption where the results can but be loss to the shareholders and annoyance to the public should continue to be made.

#### THE GEOLOGY OF CORNWALL.

In a paper "On the Geological Age of Central and West Cornwall," read before the Royal Institution of Cornwall and now printed in their Proceedings, Messrs. J. H. Collins, F.G.S., and H. F. Collins continue their former contribution, their present notes being in addition to and explanatory of the former paper; correcting also a few errors which had crept into it. In the Ladoek beds (Devonian) some additional notes are given on the sandstones, the Helford river conglomerates, with suggested reasons for the absence of fossils. Concerning the Fowey beds (upper Silurian) the opinions of Peach, Pattison, Couch, Murchison, Egerton, and others, are given, with a discussion of the fossil evidence of its age. The chapter on the lower Silurians is very interesting, as is also that on the pre-Silurian deposits. These latter underlie the lower Silurians, and that they differ greatly from them in strike, dip, and mineral composition will be evident to all who study these rocks in the field.

As to the Ponsanooth beds (Cambrian?) they say:—We have not much to add to what was said of these beds in the paper so often referred to. That they underlie the lower Silurians and that they differ greatly from them in strike, dip, and mineral composition will be evident to all who study these rocks in the field. The surface area occupied by them must be very small compared with what exists at a moderate depth. The dark carbonaceous or anthracitic (we have repeatedly found thin scales of anthracite in the deep-seated rocks of the localities referred to, and in many others) schists raised from Wheal Jane, the Perran Mines, the parishes of Illogan and Redruth, and many other localities, exactly resemble the Longmynd rocks in the neighbourhood of the Sliper Stones, as described by Murchison, whose words are as follows:—"The lowest strata of the Longmynd, or those forming the base of their eastern escarpment, range along the western side of the Stretton Valley; they are thin, fragile, glossy schists, or clay-slate . . . quartz veins occur here and there, but on the whole these strata consist chiefly of sandstone rock both schistose and gritty, and often finely laminated, in which the lines of deposit and even the rippled surfaces of the beds are distinctly visible, the mass being but slightly affected by slaty cleavage . . . some of the altered rocks contain copper veins, and others have cavities lined with crystals of quartz, and







## GOVERNMENT INSPECTION OF MINES.

The Collieries and Metalliferous Mines of the Kingdom are under the inspection and control of the officers mentioned in the subjoined list, which gives the names, addresses, and dates of appointment of (1) the chief inspectors; (2) the inspectors assisting; and (3) the secretaries of the Boards of Examination, with the month in which the examinations for Certificates of Competency are usually held. There is also shown the districts assigned to the several inspectors (A) under the Coal Mines Act, and (B) under the Metalliferous Mines Act. The whole is arranged according to the seniority of the chief inspector of the district:—

- 1.—Joseph Dickinson, South Bank, Pendleton, Manchester (1850)
- 2.—J. S. Martin, Freshwater, Manchester (1873)
- 3.—M. W. Peace, King-street, Wigan (December)
- A.—Manchester district, comprising North and East Lancashire and B.—Ocheshire, Kent, Middlesex, Surrey, Sussex, North and East Lancashire, except the detached part of North Lancashire, also Ireland
- 1.—Thomas Wynne, Gnosall, Stafford (1852)
- 2.—A. R. Sawyer, Basford, Stoke-on-Trent (1879)
- 3.—Joseph Knight, Newcastle-under-Lyme, Staffordshire (June)
- A.—North Staffordshire district, comprising North Staffordshire, Cheshire, and Shropshire
- B.—North Staffordshire
- 1.—William Alexander, Glasgow (1855)
- 2.—J. M. Ronaldson, Pollokshields, Glasgow (1875)
- 3.—Stuart Foulis, 135, St. Vincent-street, Glasgow (November)
- A.—Scotland, West district, comprising counties of Argyll, Ayr, Dumfries, Dumfries, Renfrew, and portions of Lanark and Stirling
- B.—Argyle, Ayr, Dumfries, Dumfries, Kircudbright, Renfrew, Wigtown and portions of Lanark and Stirling
- 1.—Thomas Evans, Pen-y-bryn, Derby (1855)
- 2.—A. H. Stokes, Greenhill, Derby (1874)
- 3.—Wm. Saunders, The Wardwick, Derby (October)
- A.—Midland district, comprising counties of Derby, Leicester, Nottingham, and Warwick
- B.—Berkshire, Buckinghamshire, Cambridge, Derby, Hertfordshire, Huntingdonshire, Leicester, Northampton, Nottingham, Oxford, Rutland and Warwickshire
- 1.—Ralph Moore, Rutherglen, Glasgow (1852)
- 2.—J. T. Robson, Cambuslang, Glasgow (1873)
- 3.—Robert Calder, 286, Renfrew-street, Glasgow (May)
- A.—Scotland, East district, comprising counties of Clackmannan, Edinburgh, Fife, Haddington, Kinross, Linlithgow, Perth, Sutherland, upper and middle wards of Lanark, and part of Stirling
- B.—Clackmannan, Edinburgh, Fife, Haddington, Inverness, Kinross, portions of Lanark, Linlithgow, Perth, Shetland, part of Stirling, and Sutherland
- 1.—Thos. E. Wales, Swansea (1884)
- 2.—E. W. Randall, Penarth, near Cardiff (1883)
- 3.—C. H. James, 6, Courtland-terrace, Merthyr Tydfil (January)
- A.—South Wales district, comprising counties of Carmarthen, Pembroke, and portions of Brecon and Glamorgan
- B.—Carmarthen, Glamorgan, and Pembroke
- 1.—Frank N. Wardell, Wash-upon-Dearne, Rotherham (1867)
- 2.—John Gerrard, Wakefield (1874)
- 3.—John R. Jeffery, Solicitor, 5, Piccadilly, Bradford (June)
- A.—Yorkshire and Lincolnshire district, comprising Yorkshire, exclusive of North Riding, and Lincolnshire
- B.—Yorkshire, exclusive of North Riding
- 1.—James Willis, Newcastle-on-Tyne (1871)
- 2.—J. B. Atkinson, Stockfield, Newcastle-on-Tyne (1873)
- 3.—George Southern, The Mining Institute, Newcastle-on-Tyne (January)
- A.—Newcastle district, comprising counties of Cumberland, Northumberland, and part of Durham
- B.—Cumberland, Northumberland, and the detached part of North Lancashire
- 1.—C. Le Neve Foster, Llandudno (1873)
- 2.—Angley, Brecon, Cardigan, Carnarvon, Denbigh, Flint, Merioneth, Montgomery, Radnor, Shropshire, and the Isle of Man
- 1.—Thomas Bell, Durham (1873)—In charge, 1873
- 2.—W. N. Atkinson, Shilcliffe Hall, Durham (1873)
- 3.—G. W. Bartlett, Cleveland Parade, Darlington (July)
- A.—Durham district, comprising county of Westmorland, part of Durham, and North Riding of Yorkshire
- B.—Durham, Westmorland, and North Riding of Yorkshire
- 1.—Henry Hall, Rainhill, Prescot (1873)—In charge, 1875
- 2.—J. L. Hedley, Chester (1874)
- 3.—M. W. Peace, King-street, Wigan (June)
- A.—Liverpool district, comprising counties of Anglesey, Denbigh, Flint, and West Lancashire
- B.—West Lancashire
- 1.—Thomas Cadman, Lydney, Gloucestershire (1873)—In charge, 1876
- 2.—B. Donald Bain, Newport, Monmouthshire (1877)
- 3.—J. T. Thomas, Coleford, Gloucester (July)
- A.—South-western district, comprising the counties of Devon, Dorset, Gloucester, Monmouth, Somerset, and portions of Brecon and Glamorgan
- B.—Eastern part of Glamorgan, Gloucester, Hereford, Monmouth part of Somersetshire, and Wiltshire
- 1.—R. J. Frecheville, Holyrood-place, Plymouth (1880)
- 2.—B. Cornwall, Devonshire, Dorsetshire, and part of Somersetshire, Hampshire, and Isle of Wight
- 1.—W. B. Scott, Parkdale, Wolverhampton (1873)—In charge, 1883
- 2.—W. H. Pickering, Compton Road, Wolverhampton (1883)
- 3.—W. Blakemore, Sheffield, near Walsall (January)
- A.—South Staffordshire district, comprising South Staffordshire and Worcestershire
- B.—South Staffordshire, Worcestershire, Bedfordshire, Essex, Norfolk, and Suffolk

CLERKS—MINERAL STATISTICS.—Richard Meade (1841), Home Office; James B. Jordan (1858), Home Office.

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## BRITISH DIVIDEND MINES.

Shares.	Paid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd.
12000 Bedford Unit, c, Tavis. (£1 lib.)	0 14 0	1 1/4	1 1/4	0 1 0	0 1 0	May 1884
6000 Carn Brea, c, t, Illogan	13 5 0	3 1/4	3 1/4	32 11 0	0 10 0	Nov. 1881
4000 Craignant Bach, c, t, Cardigan	5 0 0	—	—	0 5 0	0 5 0	Nov. 1881
12000 Devon St. Consols, c, s, Tavistock	10 14 10	2 1/4	2 1/4	118 7 0	0 8 0	Dec. 1880
4000 Dolcoath, c, t, Camborne	0 9 0	66	66	40 17 0	1 1 0	Nov. 1884
6400 East Pool, c, t, Illogan	5 0 0	39 1/4	39 1/4	40 1/2	0 10 0	Nov. 1884
12000 Great Laxey, c, t, Illogan	5 0 0	39 1/4	39 1/4	40 1/2	0 10 0	Nov. 1884
6400 Green Hurth, c, t, Durham	0 8 0	4 1/4	4 1/4	16 0 0	0 5 0	July 1884
9800 Gunnslake (Chitlers), c, t	2 2 0	3 1/4	3 1/4	0 19 0	0 2 0	Mar. 1882
2800 Isle of Man, c, t, Isle of Man	25 0 0	—	—	83 5 0	1 0 0	Sept. 1880
6000 Killisnoe, c, t, Chacewater	4 11 0	3 1/4	3 1/4	0 14 0	0 2 0	Nov. 1883
20000 Leadhills, c, t, Lanarkshire	6 0 0	1 1/4	1 1/4	1 1/2	0 1 0	Sept. 1884
25000 Levant, c, t, St. Just	11 0 0	—	—	0 10 0	0 2 0	Oct. 1881
4000 Lisburne, c, t, Cardigan	16 10 0	—	—	0 15 0	0 2 0	June 1883
10000 Mellanor, c, t, Hayle	2 0 0	1 1/4	1 1/4	2 4 0	0 2 0	June 1883
9000 Miners Mining Co., c, t, Wrexham	5 0 0	7 1/4	7 1/4	0 14 0	0 2 0	Aug. 1884
20000 Mining Co. of Ireland, c, t, c, s	7 0 0	1 1/4	1 1/4	24 0 0	0 2 0	Jan. 1880
1829 North Hendre, c, t, Wales	2 10 0	—	—	0 18 0	0 2 0	Nov. 1882
8146 Ditto	1 5 0	—	—	0 11 0	0 2 0	Nov. 1882
12000 Phoenix United, c, t, Llaninhorne	6 5 0	1 1/4	1 1/4	17 7 0	0 1 0	Aug. 1883
11000 Roman Gravel, c, t, Salop	7 10 0	3 1/4	3 1/4	11 8 0	0 2 0	Sept. 1884
5123 South Concor, c, t, Camborne	7 5 0	8 1/4	8 1/4	11 8 0	0 2 0	Aug. 1884
6000 South Darren, c, t, Cardigan	11 0 0	—	—	0 10 0	0 2 0	Aug. 1884
6000 Tincroft, c, t, Pool, Illogan	14 7 0	7 1/4	7 1/4	51 3 0	0 5 0	Aug. 1884
15000 Van, c, t, Llanidloes (in Ag.)	4 5 0	3 1/4	3 1/4	25 13 0	0 2 0	Jan. 1883
6000 West Bassett, c, t, Illogan	7 13 4	1 1/4	1 1/4	28 3 0	0 6 0	Apr. 1882
6000 West Killy, c, t, St. Agnes	3 12 0	9 1/4	9 1/4	1 0 0	0 12 0	July 1884
6000 Wheel Agar, c, t, Illogan	19 8 0	17 1/4	17 1/4	1 0 0	0 5 0	Sept. 1884
12000 Wheel Oreb, c, t, Tavistock	2 4 0	1 1/4	1 1/4	1 1 0	0 2 0	Nov. 1883
1024 Wheel Grenville, c, t, Camborne	18 0 0	6 1/4	6 1/4	59 10 0	0 10 0	Aug. 1884
4295 Wheel Killy, c, t, St. Agnes	5 12 0	6 1/4	6 1/4	12 18 0	0 2 0	Jan. 1884
3000 Wheel Pevor, c, t, Redruth	14 9 0	3 1/4	3 1/4	8 13 0	0 4 0	Mar. 1881

## FOREIGN DIVIDEND MINES.

Shares.	Paid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd.
35500 Alamillos, c, t, Spain	2 0 0	1 1/4	1 1/4	2 16 0	0 6 0	Sept. 1884
30000 Almada and Tiroso Consol., c, t	1 0 0	3 1/4	3 1/4	0 6 0	0 1 0	May 1876
20000 Australian, c, t, South Australia	7 7 0	2 1/4	2 1/4	11 0 0	0 1 0	July 1884
15000 Birdseye Creek, c, t, California	4 0 0	3 1/4	3 1/4	1 7 0	0 2 0	June 1884
30000 Bratsberg, c, t, Norway	2 0 0	1 1/4	1 1/4	0 4 1/2	0 2 1/2	Mar. 1884
30000 California, c, t, California	1 0 0	3 1/4	3 1/4	0 2 0	0 1 0	Aug. 1883
20000 Cape Copper Mining, c, t, South Africa	2 0 0	42 1/4	40 1/4	58 17 0	1 0 0	Sept. 1884
65000 Colorado United, c, t, Colorado	6 0 0	2 1/4	2 1/4	14 6 0	0 1 0	Oct. 1884
50000 Copiapo, c, t, Chile (24 shares)	3 10 0	2 1/4	2 1/4	2 16 0	0 1 0	Sept. 1884
70000 English and Australian, c, t, St. Aust.	2 10 0	—	—	0 3 2 1/2	0 1 0	Mar. 1884
2000 Eng.-Aus., c, t, Viet. (20000 o.)	1 0 0	—	—	0 3 8 0	0 3 8 0	Apr. 1882
25000 Fortuna, c, t, Spain	2 0 0	3 1/4	3 1/4	0 14 0	0 2 0	Sept. 1884
72000 Frontino, c, t, Bolivia, c, t, New Gran.	2 0 0	3 1/4	3 1/4	0 12 0	0 1 0	Dec. 1883
400000 La Plata, c, t, Leadville	1 0 0	3 1/4	3 1/4	0 6 0	0 6 0	7 1/2 Oct. 1882
50000 Llanos, c, t, Spain	0 0 0	3 1/4	3 1/4	19 13 4	0 3 0	Sept. 1884
20000 Marbella Iron Ore, c, t, Spain	10 0 0	2 1/4	2 1/4	0 10 0	0 1 0	June 1882
185164 Mines and Barry, c, t, Portugal	10 0 0	8 1/4	8 1/4	0 8 0	0 8 0	Oct. 1884
300000 Montana, c, t, U.S.A.	2 0 0	1 1/4	1 1/4	0 0 0	0 0 0	Sept. 1884
125000 Oxford, c, t, Nova Scotia	0 4 0	3 1/4	3 1/4	0 1 3/4	0 1 3/4	Mar. 1884
80659 Quebrada Real, Land & Cop. Venezuela	10 0 0	4 1/4	4 1/4	0 6 0	0 6 0	Sept. 1882
50000 Puncillo, c, t, Chile	4 0 0	3 1/4	3 1/4	2 0 0	0 2 0	May 1884
25000 Pitagui, c, t, Brazil (in 6000 £1 pd.)	0 18 0	6 1/4	6 1/4	0 1 0	0 1 0	Sept. 1880
1400 Pontgibaud, c, t, France	20 0 0	6 1/4	6 1/4	0 30 3 1/2	0 11 3 1/2	Oct. 1883
100000 Port Phillip, c, t, Clunes (24 shares)	1 0 0	3 1/4	3 1/4	1 14 2 1/2	0 10 1/2	Feb. 1881
50000 Rara Fortuna, c, t, Argent. Republic	1 0 0	3 1/4	3 1/4	0 3 0	0 3 0	July 1882
54000 Richmond Consol., c, t, Nevada	5 0 0	4 1/4	4 1/4	14 18 0	0 5 0	Aug. 1883
24538 Rio Tinto, c, t, Mortgage Bds., Huacana	100 0 0	90	90	5 1/2	5 1/2	Oct. 1884
325000 Ditto, shares	10 0 0	14 1/4	13 1/4	4 15 0	0 10 0	Nov. 1884
80000 Santa Barbara, c, t, Brazil	0 10 0	1 1/4	1 1/4	0 12 0	0 1 0	May 1882
12000 Schwab Gully, c, t, Kimberley	10 0 0	6 1/4	6 1/4	0 6 0	0 6 0	Oct. 1884
120000 Scottish-Australian Mining Co., c, t	1 0 0	2 1/4	2 1/4	20 p. cent.	0 2 0	Oct. 1884
80000 Ditto, New	0 10 0	1 1/4	1 1/4	20 p. cent.	0 1 0	Oct. 1884
22500 Sierra Buttes, c, t, California	2 0 0	1 1/4	1 1/4	2 7 0	0 0 0	Oct. 1884
40628 Ditto, Plumas Eureka	2 0 0	1 1/4	1 1/4	2 7 0	0 0 0	Oct. 1884
253000 St. John del Rey (25 Stock and multiple debt in)	72 1/2	72 1/2	72 1/2	5 p. c. for half-year, June 1882	—	—
160000 Tambora, c, t, Wynaad	1 0 0	5 1/4	5 1/4	0 6 0	0 6 0	Aug. 1882
650000 Tharsis, c, t, Spain (58733 issued)	2 0 0	6 1/4	6 1/4	0 18 6	0 11 0	May 1883
14000 Tolima, c, t, Colombia (A shares)	5 0 0	6 1/4	6 1/4	0 17 4	0 5 0	Oct. 1884
6000 Ditto (B shares)	5 0 0	6 1/4	6 1/4	—	—	—
25000 Victoria (London), c, t, Australia	1 0 0	3 1/4	3 1/4	0 13 10 0	0 8 0	Feb. 1881
124221 United Mexican, c, t, Mexico	9 17 0	3 1/4	3 1/4	0 5 0	0 2 0	Nov. 1884
100000 Victorine (Nevada, U.S.) Deb. Bds.	1 0 0	—	—	0 4 6 0	0 2 0	Nov. 1884
15000 Western Andes, c, t, Colombia	0 0 0	5 1/4	4 1/4	0 15 3 0	0 10 0	Aug. 1884
2100 W. Frossan (5500 pref. sh. £10 pd.)	10 0 0	—	—	0 4 2 0	0 8 0	Apr. 1881
54800 Yorke Pen., c, t, South Aust. Pref. t.	1 0 0	3 1/4	3 1/4	0 3 0	0 3 0	May 1882

\* Have made call since last dividend was paid.

## NON-DIVIDEND BRITISH MINES.

Shares.	Paid.	Last wk.	Clos. pr.
25000 Aberduna, c, t, Denbigh	1 10 0	—	—
12000 Anderton, c, t, c, Devonshire	1 0 0	—	—
12000 Assheton, c, t, Carnarvonshire	5 0 0	—	—
3200 Blue Hills, c, t, St. Agnes	4 8 0	3 1/4	3 1/4
10000 Brada, c, t, Isle of Man	1 0 0	—	—
30000 British, c, t, c, Wrexham	1 0 0	—	—
20000 British Manganese Company	1 0 0	—	—
10000 Burnhope, c, t, Edmondbyers	0 5 0	2 1/4	2 1/4
30000 Bwch United, c, t, Cardigan	1 0 0	—	—
12000 Colliacombe Consols, c, t, Lamerton	0 2 0	3 1/4	3 1/4
50000 Carn Camborne, c, t, Camborne	1 0 0	—	—
37500 Carnarvonshire Cons., c, t, Llanrwst	2 0 0	—	—
6400 Oshwell, c, t, Cumberland	2 10 0	1 1/4	1 1/4
6000 Cathedral, c, t, Gwynedd	1 12 0	—	—
30000 Clifford Amalgamated	1 17 0	—	—
25000 Oed-y-Fedw & Pant-y-Buarth	1 0 0	1 1/4	1 1/4
2450 Cook's Kitchen, c, t, Illogan	35 14 0	10 1/4	10 1/4
59000 Creiglog, c, t, Denbighshire	0 17 0	7 1/4	7 1/4
34900 Crook Burn, c, t, Cumberland	0 17 0	—	—
12000 D'Ereby, c, t, Llanrwst, £1 share	0 10 0	3 1/4	3 1/4
12000 Derwent, c, t, Durham	4 0 0	—	—
60000 Devon Friendship, c, t, c, Tavistock	1 0 0	3 1/4	3 1/4
12000 Devon Great United (24 shares)	1 17 0	3 1/4	3 1/4
50000 Drake Walls, c, t, c, Calstock	0 15 0	—	—
50000 Duchy Peru, c, t, c, Cornwall	1 0 0	1 1/4	1 1/4
12000 East Blue Hills, c, t, St. Agnes	0 5 0	3 1/4	3 1/4
6000 East Botallack, c, t, St. Just	1 2 0	—	—
6144 East Caradon, c, t, St. Agnes	5 2 0	3 1/4	3 1/4
15000 East Devon Cons., c, t, Pateley Bridge	1 0 0	—	—
20000 East Long Rake, c, t, c, Buckfastleigh	2 0 0	3 1/4	3 1/4
25500 East Roman Gravel, c, t, Salop	1 0 0	—	—
18000 East Van, c, t, Llanidloes	5 0 0	—	—
2048 East Wheel Lovell, c, t, Helston	0 3 0	3 1/4	3 1/4
100000 East Wheel Rose, c, t, Newlyn East	1 0 0	3 1/4	3 1/4
25000 Eton, c, t, c, Wotton	1 0 0	2 1/4	2 1/4
12500 Frongoch, c, t, Cardigan (11000 sh. sh.)	2 0 0	3 1/4	3 1/4
12000 Ganton, c, t, Tavistock	2 5 0	—	—
40000 Glas. Car. c, t, (30000 sh. £1 pd., 10000 15s. pd.)	3 1/4	3 1/4	3 1/4
30000 Gobbett, c, t, Devon	1 0 0	—	—
10000 Goginard, c, t, c, Carnarvon	1 0 0	—	—
32000 Goginard, c, t, Cardigan	1 0 0	—	—
25000 Godevare, c, t, St. Agnes	1 0 0	—	—
3500 Gorsefield and Merilyn Cons., c, t, Flint	2 10 0	—	—
6000 Great West Olveston, c, t, St. Agnes	0 8 0	3 1/4	3 1/4
50000 Great W. Shepherds, c, t, Cornwall	0 0 0	1 1/4	1 1/4
20000 Grogwinion, c, t, Cardigan	2 0 0	—	—
10000 Gwyn-y-Mynydd, c, t, Flint (pref.)	0 0 0	3 1/4	3 1/4
8400 Hardshins, c, t, Westmore. (10s. sh.)	0 7 0	1 1/4	1 1/4
12000 Herodsfoot, c, t, near Liskeard	1 0 0	—	—
18000 Hington Down, c, t, Calstock	0 13 0	—	—
50000 Holway Consols, c, t, Flintshire	1 0 0	—	—
25000 Kit Hill Gt. Cons., c, t, c, ar, m. (24 sh.)	1 2 0	3 1/4	3 1/4
15000 Lady Ann, c, t, Llanarmon	1 0 0	—	—
15000 Llanidloes, c, t, Wales	1 0 0	—	—
5120 Lovell, c, t, Wendron	1 8 0	3 1/4	3 1/4
9000 Marke Valley, c, t, Llaninhorne	7 15 0	3 1/4	3 1/4
8000 Mona, c, t, Anglesea	5 0 0	—	—
20000 Mona Consols, c, t, Anglesea	1 0 0	—	—
20000 Mostyn Consols, c, t, Flint	1 0 0	—	—
12000 Morfa Du, c, t, c, Anglesea	1 0 0	—	—
80000 Mounts Bay, c, t, Breage	1 0 0	3 1/4	3 1/4
6144 Mount Carbis, c, t, Redruth	1 19 0	2 1/4	2 1/4
12000 New Caradon, c, t, St. Agnes	0 8 0	3 1/4	3 1/4
2400 New Cook's Kitchen, c, t, Illogan	10 5 0	1 1/4	1 1/4
8000 New Dolcoath, c, t, c, Camborne	3 0 0	—	—
10000 New Holmbush, c, t, c, Callington	4 0 0	—	—
8000 New Killy, c, t, St. Agnes	1 0 0	1 1/4	1 1/4
25000 New Langford, c, t, c, Callington	0 2 0	3 1/4	3 1/4
15000 New Rednor, c, t, c, Callington	1 5 0	—	—
17500 New Terras, c, t, St. Austell	2 0 0	2 1/4	2 1/4
3500 New Tincroft, c, t, Lelant	1 0 0	—	—
12000 New Trumpet, c, t, Wendron	1 0 0	1 1/4	1 1/4
30000 New Van Cons., c, t, Glyn	7 0 0	—	—
12000 New West Caradon, c, t, Liskeard	0 7 0	3 1/4	3 1/4
3000 New Wheel Pevor, c, t, Redruth	0 10 0	—	—
18000 North Blue Hills, c, t, St. Agnes	0 2 0	2 1/4	2 1/4
3328 North Bury, c, t, c, Scorrier	2 4 0	—	—
10000 N. D'Ereby Moun., c, t, c, Carnarvon	1 0 0	—	—
25000 North Goginard, c, t, Cardigan	1 0 0	—	—
6400 North Green Hurth, c, t, c	1 0 0	3 1/4	3 1/4
25000 North Grogwinion, c, t, c, Cardigan	1 0 0	3 1/4	3 1/4

## NON-DIVIDEND MINES—continued.

Shares.	Paid.	Last wk.	Clos. pr.
2000 North Herodsfoot, c, t, Liskeard	0 10 0	—	—
2000 North Levant, c, t, c, St. Just	14 3 0	—	—
60000 North Molton, c, t, c, m. s. t., Devon	1 0 0	—	—
2936 North Treasurers, c, t, St. Agnes	1 0 0	—	—
8000 Northern, c, t, Durham	1 0 0	—	—
40000 Okel Tor, c, t, c, s, Calstock	1 0 0	—	—
80000 Old Shepherds, c, t, c, Cornwall	1 0 0	—	—
60000 Owen Veau & Tregur, c, t, c, Marazion	1 0 0	—	—
45000 Parys Corporation, c, t, Anglesea	1 0 0	—	—
7500 Pateley Bridge, c, t, Yorkshire	1 0 0	—	—
8000 Pedn-ar-drean, c, t, Redruth	4 10 0	—	—